AMERICAN NOV 8 - 1919 FRUIT GROVER

Vol. XXXIX No. 11

TEN CENTS a Copy



Edited by Samuel Adams









No birds get through his shot patterns

HE successful sportsman knows that his bag depends almost as much upon the shot pattern, or evenness with which the shot spreads out and covers the game, as it does upon his gun handling.

The secret of uniform game-getting patterns is in the control of the gas blast from the exploding powder. This in turn depends upon the wadding in the shell.

The Winchester gas control system

The Winchester system of wadding and loading is the result of repeated experiments to determine the most effective control of the gas blast.

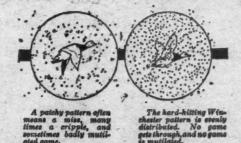
The base wads of Winchester Shells are constructed to give what is known as progressive combustion to the powder charge. The ignition spreads to the sides, in all directions, as well as forward.

Under the heat and pressure of this progressive combustion the tough, springy driving wad expands and fills the bore

snugly, completely sealing in the gas behind. In being driven through the bore this wad offers just enough re-sistance to the gas blast to insure complete combustion of every grain of powder,

so that the full energy of the whole powder charge is developed at the muzzle. Thus none of the shot charge leaves the gun until it is being driven by the maximum energy and velocity possible from the load.

At the muzzle, the expanded snug-fitting driving wad is slightly checked by the muzzle choke or constriction, while the shot cluster



travels on unbroken by gas blast or wadding, making the hard-hitting uniform pattern for which Winchester Shells are world-famous.

Uniform shells. From primer to crimp

Winches er Shells are so balanced in construction as to insure the maximum pattern possible from any load. The broad fish-tail flash from the primer gives even and thorough ignition; the driving wads completely seal in the gas behind the shot; the stiffness of the crimp or turnover at the shell head is varied exactly according to different loads. varied exactly according to different loads, great care being taken never to stiffen it to such a degree that it offers undue resistance to the powder explosion.

In addition Winchester Shells are, of course, thoroughly waterproof, insuring true shooting in damp saturating salt air or drenching rains. A special lubrication of the paper fibre prevents brittleness and splitting in dry weather.

Clean hits and more of them

To insure more hits and cleaner hits in the field or at the traps be sure your shells are Winchester Leader and Repeater for smokeless, Nublack and New Rival for black powder. Leading hardware and sporting goods dealers in every community carry Winchester arms and ammunition. They will be glad to assist you in determining the particular load best suited to your purpose. Upon request, we will send you, free of charge, our interesting booklet on Winchester Shot-guns and Loaded Shells.

Winchester Repeating Arms Co., Dept.243 New Haven, Conn., U. S. A.



The Winchester system of weading. The wadding expende evenly, scaling in the gas blast all the way to the muscule where the wadding is checked by the "choke" or genetriction. The shot situator bravels on alead whoreben. Actual test target top polists, and of 45 or 75 of the shot charge (thes. of 75 childs)

WINCHESTER

World Standard Guns and Ammunition





The Hayes Fruit-Fog Power Sprayer Does Fast Work



The Hayes One-Man Boss Outfit Sprays Gardens Quick, Easy and Cheap



The Hayes Wheel Barrow Sprayer is Ideal for Spraying Hogs



The Hayes Bucket Outfit Does Fine Work Disinfecting Poultry,



The Hayes Atomizer Is Word Its Weight in Gold for Spraying Flowers

Learn How to Kill the Pests That Steal Your Profits!

Send the coupon now. Get our Big New Book and Valuable Spraying Guide FREE. Learn how tiny, UNSEEN, hidden pests are ravaging your fruit, killing your potatoes, sucking the blood from your hogs and tormenting your poultry. Learn also how spraying will positively exterminate these disgusting pests. How spraying will rid your apples of San Jose Scale, Codling Moth, Scab, Blotch and Bitter Rot. How spraying will save your Peaches, Pears, Plums, Grapes, Other Fruit—and bring luxuriant, profitable growth. How spraying will keep your Hogs growing and keep your Hens laying. Few people realize the enormous work of destruction caused by these terrible pests that infest Fruit, Garden and Animals. You should know ALL about them. Send the coupon today.

HAYES SPRAYERS

The famous Hayes Line includes sprayers of every known size and type—from our large Triplex Fruit-Fog Power Outfit to smallest Garden Atomizer. No matter whether you want to spray Orchard, Garden, Field Crops, Vineyard, Nursery, Cemetery, Green-House, Shade Trees, Potatoes, Cotton, Flowers, Alfalfa, Sugar Beets; Disinfect Poultry, Hogs, Cattle; Whitewash or Cold Water Paint Dairy and Other Buildings—you'll find a Hayes Hand or Power Outfit

built to do the work better, quicker and easier than you ever did it before.

Fruit-Fog Power Sprayers

Fruit-Fog is today the most successful form of spray. It is produced by the 300 pound guaranteed high pressure of Hayes Fruit-Fog sprayers and the scientific Hayes nozzle. It envelops every twig, leaf and bud like fog—works into the tiny crevices and hidden places, where no ordinary coarse spray can reach—and exterminates ALL the pests and diseases. Thus it produces amazing fruit crops wherever it is used.

Send the Coupon Today!

Tell us how many trees you want to spray and how old they are on the average. Also what other uses you have for your sprayer. We'll tell you where and how you can get the style of Hayes Sprayer best suited to your needs, and its price. We'll also send our Big New Book of Hayes Sprayers and Valuable Spraying Guide FREE. Send the coupon today.

HAYES PUMP & PLANTER CO., GALVA, ILL.



Send for Big Spraying Book FREE!

This book pictures and describes the Fifty Styles of Hayes Sprayers. Tells why the deady pests that infest your Fruit, Potatoes, Hogs, Poultry, etc., cost you more each season than several Hayes Spraying Outfits Proves that these destructive pests are costing American Farmers and Fruit Growers appalling toll. Shows how thousands of owners of Hayes Sprayers have stopped these losses—and turned them in big profits. Send the common own and get the FREE BOOK.

Valuable Spraying Guide Also Sent FREE

This Spraying Guide to you, in simple, handy form, he recognize and kill ew known pest that infests eve kind of Fruit and Other Croalso every animal on the plates what solution to when to apply it—the Work when to apply it—the Work when to apply it—the Work hundreds of dollars to any farmer or fruit grower. Send coupon and get your copy FREE.

Plante
Plante
Dept.P. Gd
Gentlemen:

Please send RREE out obligation your Big S
Book and Valuable Spraying

Number of trees Average as

Other uses

Name ____

P. O.

ate...... R. F. D...

11S

Send for

g Book yles of Hayes y the deadly your Fruit, oultry, etc., season than
ying Outifu,
destructive
American
Growers an
Shows howers of Hayes
opped them into

the coupon raying nt FRE

Subscription Rates ED STATES AND FOREIGN Year, \$1.00 Three Years, \$2.00

> Advertising Rates Agate Line Flat, or \$17.50 per Inch Classified, 15c a Word

JOHN M. BRANHAM CO. Chicago Detroit St. Louis Atlanta ROY RING, Minneapolis

AMERICAN FRUIT GROWER

The National Fruit Journal of America

AMERICAN FRUIT GROWER COMPANY, Inc., State-Lake Bldg., Chicago, Ill.

er Oct. 17, 1917, at the Post Office at Chicago, Ill., under the Act of March 2, 1870

SAMUEL ADAMS, Editor ROBERT B. CAMPBELL, Publisher

Associate Edit

PAUL C. STARK MARY LEE ADAMS CHARLES A. GREEN C. I. LEWIS

Advertising Manager H. R. MANKIN J. E. FORD

Eastern Manage

R. S. McMICHAEL 280 Madison Avenue, - New New York City

XXXIX

NOVEMBER, 1919

An Auto-View of Some Orchard Districts

Observations Made on An Automobile Trip from Illinois to Washington, D.C.

OUTE 174—Aurora, Ill., to Washington, D. C. Road mostly excellent macadam or contin a few short stretches of worn (Note: This trip is through some best agricultural sections of the ntral States, and abounds in land-fwondrous beauty.)"

Honk! "1.8 miles, court-house tunn right into Lincoln Highway." we're off on an 800-mile trip to our capital. If the roads continue is we obey the speed laws we should to make a few observations along to which might be of interest to of the AMERICAN FRUIT GROWER, are lots of fruit trees growing this section of the country and if our eyes open we may discover ago, with an ideal road and the

whing, with an ideal road and the diss humming along like an electric we may safely make a few mental rations. We recall that it is a rather rally accepted fact that a man who is lack of all trades and master of none" of particularly successful in any of his trakings. A few generations ago an usuad handy man could usually make good or even better living than the lar skilled in only one line. But today we living in an age when a high degree movledge and efficiency is required anything more than ordinary accomment, or even satisfactory results, as the man who is of most use to his try and most successful from a perdament, or even satisfactory results. The safe we have a master of the conting well.

It is the day of specialists. It is alterential that a man be a master of one subject in order to achieve even it degree of success. This is just as of farming as of any other trade or casion. Mediocre results may be obtained by men who ow, with an ideal road and the

By Arnold P. Yerkes, Illinois

specialize in some one enterprise. Our finest live stock is not bred by the average farmer, but by expert breeders. Our best seeds are not grown by the ordinary farmer, but by men who have devoted years of study and experience to mastering the "12.5 miles, end of road, turn right." Fine road, but we'll go slow so as to see the country, and also because we can make better observations if our mind is not diverted by too much speed.

We observe further that it is to the in-

ated with regard to raw material, transportation, cheap labor, and other influencing factors, enjoys an advantage over his competitors who are less fortunately situated, and, if the market is limited, the man producing under the most favorable conditions is the only one who will survive, or at least he will enjoy the bulk of the trade.

or at least he will enjoy the bulk of the trade.

We do not mine coal from thin veins to-day. Our coal supply comes from those sources from which it can be obtained most easily and efficiently. The same is true of all kinds of mining and the production of other raw materials. It is also quite true in farming; the different crops are for the most part raised where they can be grown to the best advantage. This is as it should be.

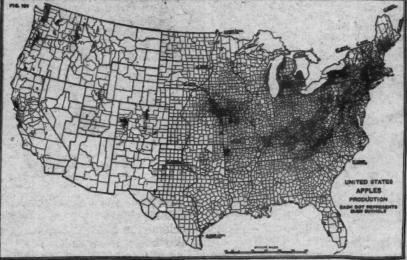
most part raised where they can be grown to the best advantage. This is as it should be.

There was a time when nearly every farm raised a patch of broom corn, and the home supply of brooms was made on the farm during the winter. The same idea was followed out in the growing of tobacco, popcorn, buckwheat, and numerous other crops which the farm family might need. In a word, it was endeavored to make the farm practically self-supporting and to avoid purchasing from others so far as practicable.

Before modern transportation facilities had come into existence this state of affairs had some justification, but it has none at present. The most successful farmers of today grow only crops with which they are thoroughly familiar and which are well suited to their soil and climatic conditions.

"19.7 miles, forks, bear left on macadam." This is a great trip; lots of atmosphere and scenery. Hope that right-hind tire stands up all right. The old boat is sailing along pretty well.

The dot maps or "graphs" which the Government issues, giving the distribution of various crops throughout the country, shows that each crop is grown largely in certain rather well defined sections, often



Distribution of Apple Production in the United States

business. The same is true of our fruits. Those of highest quality are not produced in the small orchards on the millions of general farms throughout the country, but in orchards managed by experienced fruit growers who know how to care for the trees and handle the crop.

terest of everyone that in all lines of production the line of least resistance be followed. That is, production should be as efficient as possible.

Common sense shows this and competition usually enforces it. In every industry the producer who is most favorably situ-



of the Care Given Some Home Orchards in the Middle West. The Two Trees in Foreground are Apple Trees, Hard as That May Be to Believe



Thorough Cultivation is the General Practice in the Vicinity of Ha

marked by quite distinct lines. There are nearly always excellent reasons for this limitation of a crop to a particular area or areas. Most of the causes will be climatic ones. Sometimes the date of the last killing frost in the spring or the first one in the fall determines the latitude beyond which a certain crop cannot be grown with any assurance of success. In other cases the amount of rainfall will limit the area in which a crop will thrive. In still others the altitude may be the determining factor, while the nature of the soil, location of markets, transportation facilities, and other factors will have an influence.

In the case of apples, for instance, the maps show that these are grown quite generally in almost all sections from the Mississippi Valley eastward, as well as in certain limited and well defined areas along the Pacific Coast. However, there will be found a few sections through the east where the dots representing the acreage are very close together, indicating that in those sections a high percentage of the land is devoted to the raising of apples.

"24.6 miles, R. R. tracks ahead, turn left and immediately right." That's just like a lot of other Blue Book directions—tell you to do the only thing possible to do unless you turned around and went back, and then say nothing whatever about a fork with two equally good roads. Such directions really interfere with calm observations.

All Farms Had Apples

All Farms Had Apple

But to resume: the reasons that apples are so generally grown throughout this eastern half of the United States are several. In the first place, the early farmers had the same idea about apples as they did about broom corn, that is, they believed the farm should raise all they needed. As a consequence nearly all of the early settlers planted a few fruit trees, always including some apples. These were seldom, if ever, intended to provide fruit to sell, but simply for home consumption.

fruit to sell, but simply for home consumption.

As the cities developed and the market for fruit grew, the raising of fruit as a business in itself became more and more common. So long as the trees were planted only for home needs it made little difference whether conditions were ideal or even well suited for them, but when it was a matter of engaging in fruit growing as a business, with little or no other source of income, it was highly important that those areas where conditions were most favorable should be selected.

It has, therefore, been the market demand which has caused the development of fruit growing in those sections where conditions were best suited for the purpose, while home wants were largely responsible for the planting of at least a small orchard on a large percentage of farms. Experienced fruit growers, and those who were wise enough to take the advice of men who knew, selected the location of their orchards with an eye to good air drainage, rainfall, soil, transportation facilities, and also the value of the land itself. The latter was of particular importance because of the number of years required for an orchard to reach the bearing stage, and if planted on high priced land the interest and overhead charges during these years would be excessive. Fortunately for fruit growers, land which was but poorly suited for general farming purposes was often admirably adapted for the raising of fruit and could be obtained at reasonable prices.

"33.9 miles, pass over iron bridge and

prices.

"33.9 miles, pass over iron bridge and turn right onto brick pavement just beyond." The fellow who wrote these Blue Books was a real humorist. How else did he expect any one following this road to get across the river? There is no way of going under the bridge, and there's too much water to go around it, yet he is careful to state specifically that one should pass "over" it.

Home Apple Orchard.

We are now passing through a part of the country where the government maps show that a good many apple trees are growing. They are here, sure enough, but in small orchards, on almost every farm. One hundred trees seems to be a fair sixed orchard as a rule, some smaller, but not many much larger. This is certainly fine farming country. All the crops seem to be quite good with the exception of the fruit. This is high priced land, as farm lands go. It is doubtful if even the most remote farms through this area could be bought for \$150 per acre, and many of these farms are held at more than twice that figure. On land

as valuable as this it is quite obvious that a farmer must raise pretty good crops in order to make any money, as the overhead

as valuable as this it is quite obvious that a farmer must raise pretty good crops in order to make any money, as the overhead charge is quite steep.

Most of these farms look prosperous, however. They naturally should with such yields of corn and small grain as are to be seen on every side. But we are trying to observe the orchards. Certainly very few of these give any indication that they will pay good interest on land worth \$300 per acre. Why most of them are little more than pasture lots for hogs and other stock. Some are raising a little grass which is apparently cut for hay, while in other cases the principal crop from the ground occupied by the apple trees seems to be almost entirely weeds. As for apples, there aren't many and such as there are appear to be wormy almost without exception. In many orchards the fruit seems to be almost entirely on the ground. Of real first-class fruit there is little or none.

It seems plain that few, if any, of these orchards have been sprayed, and it is not neccessary to slacken speed to see that very few of them have been pruned for years. And such pruning as has been done would make an experienced fruit grower almost split his sides laughing. Cultivation of these orchards is almost unheard of, except such as is performed by the rooting of the hogs which often run in them.

Altogether the orchard is not taken seriously in this part of the country. It is expected to furnish sufficient fruit to meet the lamily's needs for freshly cooked sauces, dumphings, and cobblers, as well as raw fruit, during the summer season. Also to provide sufficient canned fruit for the winter months. If there is a surplus it will be disposed of at the local store, or given to some neighbor whose orchard is not "doing well" this year. The droppings make good relish for the stock.

Many of these farmers will frankly admit that the trees are not profitable and are really a sort of nuisance, but they make some shade about the place and the fruit is quite a job to grub the trees out, so they are lef

Old National Highway

We continue to observe for two or three days of travel through the Hoosier and Buckeye states that much the same conditions prevail along the route as had been found in northern Illinois. As we pass along the old National Highway through the eastern part of Ohio and the panhandle of West Virginia, where the land is becoming decidedly rolling, not to say hilly, we find the farms looking much less prosperous than those passed earlier on the trip. Much of the land is stony, and the fields are small and of irregular shapes, due to the creeks and ravines. While in northern Illinois and Indiana the farming operations were carried on with large sized modern machines, here two-horse machines predominate, and even more primitive machines and implements are in evidence. Primitive, did we say? Yes, that's the word, for, would you believe it?—men are in the fields cutting outs and other small grains with cradles, and binding them by hand as in the days when the country was first settled. Shades of McCormiek, Marsh and Appleby! The inventors of modern harvesting machinery must turn in their graves at such sights.

There is a vivid contrast between this section and that passed farther back. On the most fertile and high-priced farm land of the middle west hundreds of acres are occupied by orchards which are certainly the least profitable. But the land is ideal for general farming, and the farmers are, on the whole, quite prosperous. In this rough country farther east, where conditions are much better adapted to orchardry or forestry, and but poorly adapted to general farming, an even smaller percentage of the land is devoted to fruit, while men are struggling to make a living by cropping the hilly, stony fields by means of the only methods which can be used with any degree of satisfaction.

The National Highway forms an ideal automobile road through this country; the rolling hills form landscapes which delight the eye, but the mental as well as the physical vision of the men who are struggling, under a tremendous handicap, to wrest a living from the soil, detracts greatly from the more pleasurable aspects of the journey. We might stop here and draw a useful lesson on this point, but this is a much-traveled highway, and we will not interfere with traffic by stopping. Besides there is much to see farther on.

We make good time over this old highway which Washington is said to have surveyed. We mentally observe that the Father of His Country was apparently

way which washington is said to have veyed. We mentally observe that the Father of His Country was apparently more interested in laying the road out as the shortest distance between two points than in avoiding hills. However, we don't spend as much time getting over them as he probably did. And as we pass the grave of General Braddock, who paid with his life for his education in the methods of warfare as practiced by the American Indians, and never returned to tell of his trip along this historic route, we earnestly hope that nothing happens to our brakes while descending some of the long hills we can see in the distance before us, otherwise the AMERICAN FRUIT GROWER may have merely a short observation with a black border as a result of this trip.

In a Real Apple Country

In a Real Apple Country

But we must hurry along as fast as the law will permit—of course we wouldn't break the speed limit. Farther on, along this same road, is located a small section where the government maps show a myriad of dots, indicating that a great many apples are grown there. This is in the vicinity of Hancock, Maryland, about midway between Cumberland and Hagerstown. Across the southwest corner of Pennsylvania and the western end of Maryland the National Highway traverses a mountainous section with considerable timber and cut-over land, but with little farming or fruit growing of any kind. As it approaches Hancock, the Potomac Valley is wider and slightly less hilly, though the land is far from level in this neighborhood.

Oh, yes, there are orchards here, too. Orchards, did we say? Perhaps apple "forests" would be more appropriate. There are apple trees everywhere; on the steep mountain sides, on the smaller hills, and on such level land as can be found in the valleys. They even skimp on space for buildings to make more room for trees. Here apple growing is a real business in itself and if any other crops are grown by the orchardists they are mere side issues. It is doubtful if there is any other like area in the world where a greater percentage of the land is devoted to apples.

For ordinary agricultural purposes much of this land would be of very little value, although it might compare favorably with some of the rough farming land in southeastern Illinois and the panhandle of West Virginia. For orcharding, however, it is almost ideal. The land was cheap before the trees were planted, the soil good, air drainage excellent, unlimited markets within a comparatively short radius, and those passed early in the trip is most striking. Instead of allowing the trees to grow into any shape or form which nature may conceive, they are most carefully pruned into the most desirable shapes from the standpoint of ripening the fruit, sease of picking, and utilizing every inch of ground.

Science and Fruit

Science and Fruit

Everything known to science is done to produce the largest possible amount of highest quality fruit, and the results are truly remarkable. Instead of hauling a few baskets of wormy droppings to the local market, these fruit growers ship hundreds of carloeds, yes, even trainloads, of hand-picked fruit, carefully sorted and packed by experts, to practically every large market in the east.

Here is real efficiency in fruit growing. It is a business and science in itself. While a great deal more is spent on each acre of orchard than is done by the average farmer who maintains only an acre or two of trees, nevertheless the cost of growing a bushel of apples under these conditions is only a fraction of that where the orchard is a side issue or a matter of convenience. Spraying, for example, is done thoroughly, with the proper chemicals and at the right sensons. No diseases or insect pests are harbored and distributed from these orchards.

While crops are sometimes grown be-

tween the trees up to the time they repearing age, even this sort of cropping performed with judgment and care, a steps taken to maintain the fertility of soil. Cover crops are common, and of turned under for manurial purpose. Tultivation, instead of being turned on to a brood of rooting pigs, is perform with the most improved tillage machinin many cases drawn by gas tracted although the high degree of clean cultivation often found in apple orchards on a Pacific Coast is not maintained in meighborhood, most of the orchards ceive excellent treatment in the matter. ceive excellent treatment in the matter

ceive excellent treatment in the matter cultivation.

The heavy rainfall and naturally any growth of weeds in this section, togeth with the rolling nature of the land, make a much more difficult matter to keep a orchards entirely free from weeds grass than is the case in some plane but most of these growers believe the cultivation pays, and they practice it, use of tractors for this purpose has bettered in a number of cases and with parently very satisfactory results in ministances. Of course some orchards better suited for mechanical power the others, because of their less hilly nature but it seemed to be the rather gram opinion that the tractor was a valual addition to the orchard equipment, would be used in constantly increase numbers. numbers.

Trucks and Tractors

Motor trucks and Tractors

Motor trucks for hauling the fruit is a railroad are also being used in grain numbers each year. With the truck a tractor the orchardist is almost enterelieved of the necessity of maintain horses for his operations, and such as me be retained can be used to better advantathan under the old conditions.

After visiting a few of the orchard the vicinity of Hancock, and noting contrast with the raising of apples by average farmer, we thought some thous about relative efficiency, and jacin of trades. But the family is anxious to the world; we ought to make it in a few hom. Bang! There goes that right-had the which we've been expecting to let go as since we started. We could probably immade much better observations if that is hadn't worried us.

HORSE-POWER OF A TRACTOR By M. S. Nichols, Member As Society, Agricultural Engin

Society, Agricultural Engineers
A prolific cause of confusion and farmers who own tractors or who contained the purchasing them, is the great we tion of ratings. So great is this variety that tractors with the same powered gines vary in their rating, thirty or me per cent. Numerous articles appear farm publications, advising farmen to tractors of certain power for certain when by certain manufacturers, they me the property of the property of results.

It is a simple matter, however, for farmer to estimate quite accurately power of his tractor by using the following mula:

D2x.7854x1.xNxR

a. Ar

D2x.7854xLxNxR -Horse Power.

13,000 to 15,000

D2 is the diameter of bore of the ginder times the diameter (or square multiplied by 7854 which gives the are one end of the clinder. This is multiplied by L, which is the length of the stress the motor, and is in turn multiplied by the number of cylinders and by L number of revolutions the crank makes per minute. When this final prouct is divided by from 13,000 to 15,00, will give a conservative and close estimated of the horse-power of the motor on the latter of the motor of the motor on the latter of the motor of the motor on the latter of the motor of 13,000 to 15,000

4x4x.7854x5x4x1,000 -19.2 H. P.

1,300 Now 1 H. P. (horse power) is the sound in th Frower

me they read of cropping is and care, and fertility of the mon, and often surposes. The g turned one is performed age mechang age mechang on the cained in the corchards on the matter of

al power than hilly nature ather generates a valuable uipment, and the light increasing the l

Orchard Problems and Their Solution

of your "Orchard Problems." Our desperts will help you to solve them. I will be answered promptly by address "Orchard Problems" Dept., In Fruit Grower, Chicago.

Are tomatoes a good intercrop to between the rows in a young orchard?

Tomatoes, where there is a good for them, are very profitable as an op. They do not shade the trees and are a benefit to them. If tomatoes need in rows the owner will be sure ivste them and at the same time he livate his trees, thus insuring good th. The Rosecliff Orchards of boro, Va., grow a great many ges as an intercrop and Mr. Craig, anager, says it is an excellent crop. ong orchards have certainly made id growth. One of his young or-

By Paul C. Stark, Associate Editor

Triangular Plan of Planting

Q.—How is the best way to lay out an orchard by the triangular plan, that is, where the trees are an equal distance apart and one tree in one row is opposite the open space between the two trees in the adjacent row. What are the advantages of planting by the triangular method?—A. T. C., Illinois.

A.—The triangular plan has been used quite extensively, particularly by commercial orchard men. It has the advantage of allowing 15% more trees to the acre than the regular square plan. By each tree being epposite the open space between the two trees in the adjacent row, it means that the limbs will not interfere

orchard on it. The land can be cultivated for one year, but if cultivated longer than that, it washes badly. What do you advise? —P. T., Mo.

Definition of the month of the

land owners who have planted orchards have become rich men. This same thing is true of a great many parts of the country where the land is so rolling that it washes badly when the owner tries to cultivate it. On this very steep land where orchards are planted, it is advisable to keep away from cultivation, using clover or some other crop that will hold the soil and keep it from washing.

This summer I saw orchards in Virginia planted on mountain sides that were so steep it was difficult to walk up them, too steep for a team to haul up wagons, yet these orchards are selling for big money and are bringing big profits to their owners. One orchard that I visited was so steep that it was necessary to make a terrace below each row of trees so that the spray rig could be hauled between the rows. The water had to be pumped by gasoline engine up to the top of the mountain and then it was used by the spray rig, thus making it unnecessary to haul the water up the hill. Great tracts of land that are not nearly as steep as this and which can be utilized for orcharding without this ex-

the other varieties in October. They have held up fairly well, but would like to know if I am making a mistake in picking time. I ship my apples to Chicago for storage.

held up fairly well, but would like to know if I am making a mistake in picking time. I ship my apples to Chicago for storage.

A.—The picking operation is one of the least understood in the whole orchard business. Wherever a man has trouble with his apples not keeping, it is generally due to picking them at the wrong time. Just as soon as the apple seeds turn brown and gets sufficient color, it should be picked, packed and rushed to storage or sold. A good many people make the mistake of leaving the apples on the trees too long, sometimes even until they become mellow and then they wonder why they don't keep late.

The Jonathan and Grimes Golden in your section, instead of being picked late in September, should be picked early in September. Of course you will want to get sufficient color on your Jonathan, but most seasons early in September will give you this color. Of the other varieties you mention, I would pick the Delicious colors up early and should be picked not later than the middle of September. It keeps late in the season. I have tasted Delicious grown right here in Missouri that have been kept in storage until March and April and came out almost as juicy as the day they went into storage. If these apples had been allowed to stay on the tree unil they became mellow, they would not have held up nearly as long and their quality would have been greatly imparied. Another point about the Delicious and all other mild apples—it will greatly increase the flavor if they are allowed to become cold. A mild apple that is warm is not nearly as good to eat as when it is cool. Your Mammoth Black Twig and Willow Twig can be left on later than the other varieties mentioned. Both these are sorts that are slow in coloring, but just as soon as they get sufficient color, they should be picked.

Thelieve that far too little attention has been given to the attention of picking fruit and as soon as all orchard men learn this

been given to the attention of picking fruit and as soon as all orchard men learn this important problem, the longer will apples keep, whether in ordinary cellars or in cold storage. I believe that far too little attention ha

Q.—I have an orchard of 75 trees, three years old and several trees are completely ruined and others injured by borers. What shall I do?—Mrs. F. B., N. Y.

A.—Your trees should be gone over carefully twice each year and when a borer



p Hillside Orchard in Maryland that Recently Sold for Almost \$1,000 Per Acre. Many Orcharde Throughout the Country, on Land Too Rough for Regular Ferming, Are Bringing Big Prices

is is now six years old, and the variate Lowry, Delicious and a few Rome by. His Lowry and Delicious have a crops. Had a good crop this year an old) and began bearing a few apoweral years ago. Rome Beauty are beginning to bear. His orchard is set on a very rocky mountain side a the average man would little think chard could be grown successfully, ir. Craig has demonstrated that it and he has a beautiful as well as able orchard growing on this land. I visited his orchards, he was growmatoes as an intercrop in part of Another crop that Mr. Craig grows peas. He lets them stand over winded plows them under in the spring keeping up the humus and adding food,

What can I do for an orchard that a neglected and not sprayed? Vari-ce Jonathan, Winesap, and Ben -W. C. W., Okla.

For an old orchard, your varieties the than the ordinary. Of course, avis is a poor sort, but I hope you may a few of them. It is almost implementation in tarticle on this big subject. But, in all way, I would suggest that the ling to do is to clean up the orchard, a weeds and clean out the fence rows. Lart on the tree; cut out all the dead do some heavy thinning out of the ear, get the top of the tree open so allght can get in.

pruning is necessary on most old for orchards but your reward will be when your rejuvenated orchard bear properly. Of course, prundal that is necessary, spraying done and probably fertilizer will d. Note answer to another questilizers in this article. After you red on your orchard, don't stop, the best cared for spot on the farmicante an old orchard is quite an ding, but it pays, unless the trees ar gone and too old.

as quickly as if they were planted on the square plan, also there is no unused space in the center of the row as there is in the square plan. Furthermore, it permits cultivation in two directions. This is often advisable particularly on hill land where it is advisable to change the direction of the cultivation to prevent washing erosion.

Now, as to the best method of staking out by triangular method, the following is one of the best ways that I know. I have seen orchards in Virginia and other parts of the country that were planted by this method and even on very broken and hilly land they lined up in several different directions very accurately. This is the method:

Make a triangle of heavy wire, each side

method:

Make a triangle of heavy wire, each side of which is the same length as the distance between trees. Each corner of the triangle is formed by an iron ring. Stake the first row at intervals equal to distance between the trees. To get the position of the first stake in the second row, three men take the wire triangle, each man at one corner, and two of them with their rings held at the first and second stakes in the first row, enable the third man, by pulling the wires taut, to locate the first tree in the second row. Moving to second and third stakes of the first row, he locates, by means of the triangle, the second stake in the second row, and so on across the field.

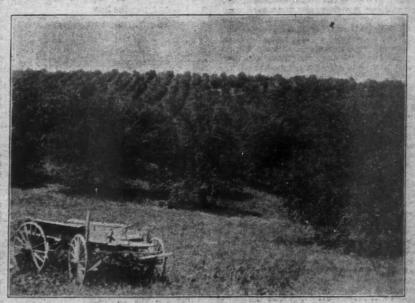
Q.—I have a patch of raspberries infested

Q.—I have a patch of raspberries infested with scale, and we lost heavily from an-thracnose. How should we spray?—W. A., Iowa.

A.—For anthracnose, use bordeaux mixture 3-4-50, when new canes are six to eight inches high in early spring; second spray, two weeks later. Cut out and burn diseased parts after picking. For scale, if not too bad, spray with scalicide or other miscible oils. If too badly infested it will probably be best to take out your plants and put out a new lot.

Orchards on Steep Hillsides

Q.—I have some steep hill land that is fairly good soil and am writing to ask if you think it would be satisfactory to grow an



A 9-Year-Old Orchard on a Rocky Hillside that Produced Three Barrels to the Tree

pensive system of terracing and pumping of water, can be put into paying orchards. I have seen orchards which were grown or laid that was formerly held at \$25 or \$30 an acre and which now could not be bought for \$300 or \$900 an acre, because these orchards are paying dividends on a larger valuation than the amount named.

Apple Picking Information

Q.—I have the following varieties in my orchard, Jonathan, Grimes Golden, Mammouth Black Twig, Willow Twig and Delicious. I have been picking the Jonathan and Grimes Golden in late September and

is found it should be cut out. If you cannot get to it with your knife it can be killed by running a pliable wire up into the burrow. Then smooth the wound with a sharp knife, cutting back to good wood, and paint with pure white lead and raw linseed oil.

Q.—Can you give me information about how to control mice that eat off the roots of bearing apple trees, causing them to die? I have had some trouble with this pest.—A. T. S., Va.

who contents the variation powered shirty or more appear is appear to be contain wor, mation siw ever, for the curately to the followin

TRACTOR

r Ame

pest. I understand that in certain parts of Virginia it is quite serious, but growers who have taken it in time, have been able to control the mice unjury by poisoning

to control the mice unjury by poisoning the mice.

A mixture of one-half bicarbonate of sods and one-half strychnine mixed up together and sprinkled on sweet potatoes that have been cut up in small cubes, can be used with good success. It takes about one-half ounce of the mixture of powder to about three quarts of cut up sweet potatoe. After this powder has been sprinkled on the arest potatoes, they are put in the mice holes, which can be easily seen where the mice are making their nests. Last summer when I visited the Massey told me that he had had some trouble with mice in his orchard, but had been able to control it. They had found that their two Airedale dogs had been very valuable in helping to exterminate the mice. The dogs could tell which were the live holes and in this way it could be determined very easily where to put the poison, thus making the poisoning more effective and quicker.

If you think you are having any trouble with mice, watch carefully for these mice holes and poison them before they get a chance to kill your trees. Every tree in a well cared for archard is too valuable to take chances of losing it.

Sour Cherry Orchards Pay

Sour Cherry Orehards Pay

Q.—1. Would you recommend planting sour cherries for commercial purposes? If so, what may I reasonably expect as gross yearly returns, and how long before the trees begin to bear? Also what varieties would you suggest?

would you suggest? Also what varieties would you suggest? A.—1. Sour cherries should pay you, but I could only guess at the returns. In this country, \$200 to \$400 per acre is often reported. Like any other orchard, however, the returns will to a large extent depend on the way the orchard is handled. If a good variety is used, and the orchard given proper care, it will bring you profitable returns. There are three groups of good sour cherries—Early Richmond group, Montmorency group and English Morello group, but the tendency in all cherry growing communities is toward Montmorency, but nearly all of them are good. They should be bearing four years after planting under ordinary conditions,

Q.—2. Would you advise planting apples and using cherries as filters? I am at 3.500 feet altitude. The canning factory here paid 35 per pound for sour cherries this year.

A.—2. I believe it will be better to give

A.—2. I believe it will be better to give your apple and cherry separate territory. For a strictly commercial cherry orchard, I would rather grow cherry trees only. Plant them eighteen feet apart each way which will give you 134 trees to the acre.

Q.—How long can apples be held in common storage? Would it pay for me to build a concrete storage house, or should I store my fruit in a regular cold storage plant?—S. T., Ind.

A.—In answering this question, a great deal depends on the varieties that you wish to store, also as to your market conditions. Under certain conditions it is advisable to hold at least a portion of your apples in common storage. If you have a trade that calls for apples in December or around Christmas time, you can hold a number of varieties successfully in common storage until that time or even later.

A concrete store house properly built.

number of varieties successfully in common storage until that time or even later.

A concrete store house properly built, will keep the apples in first class condition. I have seen storages that were built partially underground and that of course, is better protection against frost and heat, than if the whole storage house stood on top of the ground. 'Proper ventilation is one of the big factors to consider. In that way you cannot only keep the apples cooler and at more regular temperature, but they will hold up longer. If you do not care to sell your apples until late spring, I would certainly consider a storage house for at least part of them. Where common storage is particularly advisable, is in places where cold storages are not near the orchard and where it is necessary to ship the fruit some distance before they can be put in cold storage. If you have a cold storage close at hand, it would probably pay you to put your fruit in it. Write to Department of Agriculture, Washington, D. C., for Farmers' Bulletin 852.

Q.—I am sending you some leaves from my apple trees. What is the matter, and how should they be treated?—Mrs. J. W. F., Mo.

A.—These leaves showed the unmis-kable orange yellow spots produced by

cedar rust. The only really sure method of control is to destroy cedar trees within a mile or two of the orchard. There is a great variation in rust resistance in the different varieties. York Imperial is particularly susceptible, while Stayman, Delicious, Grimes, etc., show little or no signs

M. A. C. of Virginia sends in some leaves affected with cedar rust and asks how to control it. This is covered in reply to Mrs. J. W. F., above—which please note.

Q.—What is the best thing to do with choice young fruit trees and shrubbery that have been girdled and those that have been barked?—Mrs. E., N. Y.

barked?—Mrs. E., N. Y.

A.—If fruit trees have been girdled in the summer time they will probably die. If girdled in the winter, they can often be saved by bridge grafting, that is, setting grafts so that one end is anchored to the tree below the wound, and the other end above the wound. Several grafts should be used on each tree. If the tree is barked and not girdled, smooth the edges of the wound with a sharp knife, remove the damaged surface and paint over with white lead mixed with pure linseed oil.

Fertilize the Orchard

Q.—My trees are about thirty years old and have not been bearing very well lately. The foliage doesn't seem to be very strong and the fruit is rather small. I have done some pruning but they are still rather too thick in the center of the trees, I think. What treatment would you use? The orchard is in sod and is too steep to cultivate.—H. L., Va.

vate.—H. L., Va.

A.—Judging from the description of your orchard, I would say that your trees are starving for want of plant food. There are hundreds of orchards over the country where the trees are in this condition, but if proper methods of fertilizing and care of trees are used, these orchards can be made to produce very profitable crops. Of course, your trees should be properly pruned. Thin out the surplus limb growth particularly in the center of the tree, let in some sunshine and air. Your fruit will color better and have less trouble from funguous diseases if the head of the tree is open.

funguous diseases if the head of the tree is open.

As your orchard is too steep to cultivate, I would advise leaving it in sod and depending on fertilizing. The most important thing that you need for this orchard is notrogen and one of the best forms to use is nitrate of soda. Sulphate of ammonia is another form of nitrogen that has given good results with some growers. If you use nitrate of soda, spply five pounds nitrate to the tree, scattering over the ground out as far as the limbs reach. Also add some phosphate such as bone meal, about three pounds. There are other forms of phosphate that would give just as good results. Of course, your trees should be thoroughly sprayed. You will be surprised what a big difference this treatment will make in the first year. It will pay you many times over for the fertilizer and trouble. As it is now, your orchard is not a paying proposition. By giving it the right care and following this method of treatment you can make it a big payer. Just remember that land that has been planted to corn so much that it h

the orchard.

If your orchard was not too steep, I would suggest that in addition to the fertilizing advised above that you plant some sort of cover crop next summer, something like cowpeas or soybeans. This could be plowed under and would add humus and plant food to your soil.

Q.—What is the most effective way of protecting a good-sized orchard of young fuit trees from field mice and rabbits where rhe trees are mulched?

What are the results to a young fruit orchard from raising alfalfa continually in it? Some of the trees will be well mulched and some mulched not at all.—H. W. G., Mich.

Mich.

A.—I find that alfalfa has been used to some extent in Illinois. Mr. McClay over in Pike County is using it in his young orchard and is getting excellent results. It is, of course, a leguminous crop and adds nitrogen to the soil, but its main value is in the fact that it has long deep roots which tend to break up the sub-soil, making it porous and enables it to hold water longer and better. I intend to plant an orchard this fall and I expect to use alfalfa on some

Continued on page 40

The Cherries Open California Fruit Season

By Robert E. Jones, California

THE CHERRY is the advanced patrol of the fruit season in California.

Everyone interested in fruit growing, shipping and marketing looks forward to the appearance of the first box of this delicious tree fruit, for it means the opening a particl of tramendous activity artendary. delicious tree fruit, for it means the opening of a period of tremendous activity extending from early in May until about the first of December. The cherry is the subject of a great deal of rivalry among fruit growers and shippers, too, for there is the natural pride that goes with getting on the market first and likewise a heavy return for the first fruit offered.

for the first fruit offered.

Almost invariably, the first box of cherries will sell in New York, Pittsburg, Chicago or Boston at from \$50 to \$100 for ten pounds. Of course the intrinsic value of

is third, and Indiana fourth. Little is known of the sour cherry on the west coast all of the commercial varieties are used. This is true not only of California cries, but of those shipped from Oregon and Washington, which are a little later that those of California, as well.

Figures of the State Commissioner of Horticulture show that in California that are 836,610 cherry trees of which 565,12 are in bearing. Practically all of the are in the northern part of the state. So Bernardino, in southern California, produces some but the counties of Santa Claudianeda, Butte, Contra Costa, Place, Sacramento, San Benito, San Josopia Santa Cruz, Solano and Sutter are better known for their cherries.



Picking Cherries in the Vaca Valley, California-the Earliest Cherry District of the State

the fruit does not come any where near the the fruit does not come any where near the figure, but some progressive grocer catering to a fancy trade or keeper of a high-class restaurant appreciates the advertising value of having the first cherries. At any rate, the grower gets the money and that is what is most important. It must be admitted that the first cherries are usually somewhat on the youthful side of maturity, but if they have color, the buyer takes them eagerly.

them eagerly.

With the appearance of the first cherries, the express companies get out their "pony" refrigerators and ship them in these to market. As the season advances, enough boxes become available in the different districts to make up a car load and then a refrigerator express car, filled with cherries, is shipped to the east. The first carload usually goes direct to New York, where it is auctioned. The first car has brought as high as,\$5,000, for the demand for early fruit is still keen.

Big Demand for Cherries

Big Demand for Cherries

It seems that the market never will get too many cherries. The crop is a highly profitable one for those who know how to grow them and have the right sort of soil and location. The big cherry districts of California are Vacaville, Solano county, Sacramento River district, Placer county and Santa Clara valley. The season opens in the Vacaville district the first or second week in May and then Sacramento River and Placer county come along, to be followed by Santa Clara, where the weather is cooler because of the proximity of the coast and ripening is retarded. By July 20 the last cherries are gone. California has shipped from the state close to 300 cars loads in the season in addition to what are canned.

Canned cherries are so much in demand that in recent years, shipment of fresh fruit has been somewhat restricted. And the demand seems to have no waning; canneries paid unheard of prices the current season for the fruit.

In the production of cherries California is first, Michigan is second, Pennsylvania

The Popular Varieties

uring a lo

Da

The Popular Varieties

Royal Anne, a pale yellow variety and Black Tartarian are the most common varieties. Purple Guignes are first on the market. The Bing is the big black chemy which is very popular because of its and flavor and the solid meat, but it is new as is not so extensively planted as other. Black Republicans are favorably known. Old pioneers who came to California mine in the early days planted chemy trees in California. An auto traveler usuddenly come upon a fine old speciment the midst of some forgotten mining community bearing annually its load cluscious fruit. Georgetown Ridge, and old Hangtown, an early mining district the state, produces some of the finest element of the common one yet has tarted there commercially. The tree that stand today are almost as large as the forest trees about them.

The pioneer cherry grower on a commercial scale in California was Mrs. Estimated.

forest trees about them.

The pioneer cherry grower on a mercial scale in California was Mrs. Zin T. Buckingham of Vacaville, who plants her trees in the early days in a grain self. She waited many years to see them cominto bearing, but they finally came into bearing, but they finally came into such an abundant yield that a problem a marketing them stared her in the least There were 600 tons in sight and it then that Mrs. Buckingham knew a must go elsewhere to self her crop. Selfornia, along the refrigerator car into California, shippin her cherries east to a good market. The that small beginning, the fruit shipping the dustry began and, last year, more than 25,000 carloads of fresh fruit were shippin in refrigerator cars out of California.

WINE GRAPES FOR HOGE

The prohibition amendment holds terrors for P. H. Smith, Sacramento Couty, Cal., vineyardist, who is now feed wine grapes to his hogs and reports that is greatly pleased with the results. Altenated with alfalfs, wine grapes produst corking big porker in no time, says is Smith, who further asserts it is cheap for

ason

rower

e west coast;

missioner difornia there hich 565,122 all of these state. San ifornia, pro-Santa Clan sta, Place, and Joaquia are are hettered.

variety and st common first on the lack cherry of its sin, is new and as other.

The HIGH prices secured throughout the Pacific northwest the past time, This is especially true of the planting of which had been at a lifer five years. In the new plantich will be made throughout the northwest, it is well for growers to mind the mistakes which were the past, the one big mistake the Pacific northwest made ten to in its fruit development was the top in the past, or all apples, or all apples, or all

ory has demonstrated that this a poor one. That diversity is by wiser method to follow. Not only yin a region but also diversity on dividual ranch. There are two or valleys in the Pacific northwest ave diversified considerably, such Willamette and Umpqua Valleys of Oregon, and the Yakima and Walla Valleys of eastern Washing-leastern Oregon.

If districts are beginning to realize they can grow other varieties of dvantageously. For example, the Hood River Valley which has its attention in the past almost to apples and strawberries, is ding that some of its most profit-hards are the pear and cherry has demonstrated that this

ersified Fruits Desirable

Diversified Fruits Desirable

in, the center of the Willamette and a typical example of what diverby will do. In ten years, this region has at his hard times horticulturally. Last the business was over \$6,000,000. One are on investigating this region, a large and prunes, loganberries, English walnut filberts, berlies of all kinds such as inheries, blackberries, strawberries, anha, pears and nursery stock. The cent development of the horticultural reducts plants in the northwest means int if these plants are to be maintained the future, that they must have diminished tonnage. There are in the state of the best advantage, they must operate to the best advantage, they must operate wing a long season and have a good variaty of produce to select from. We have a

By C. I. Lewis, Associate Editor

Desirable Varieties of Fruit to Plant

few suggestions to make regarding varieties to plant which may be of value to those who are considering enlarging their plantings.

East of the mountains in the Inland Empire, probably such apples as Winter Banana, and Delicious will be the favorites, owing to the demands for these varieties. Other than these, early varieties should be perferable to winter varieties. We have a congestion of varieties during November, December and January, and varieties should be selected that would produce fruit earlier than this period or somewhat later. In the regions west of the mountains, the Ortley, Winter Banana, Grimes Golden and Rome Beauty, are varieties which are proving their merit. It is doubtful if any section of the country can excell these regions in the production of Winter Banana, and Ortleys.

Pears should receive much more attention than they have in the past. The northwest pears are unsurpassed in quality for canning as well as being in great demand for shipping green. The Bartlett should be the backbone of our business, but we should supplement this with a good trade in fall and winter pears. Probably the d'Anjou is as good a variety for the Inland Empire to grow as any, in regions like Hood River the d'Anjou should be the favorite although splendid Bosc can be produced. In western Oregon and Washington, the Bosc and Clairgeau are increasing in favor, while in southern Oregon, the d'Anjou, Bosc, Comice and Winter Nelis are all worthy of consideration.

Selecting Prune Trees

Selecting Prune Trees

Selecting Prune Trees

The prune business in the northwest has been confined almost entirely to Italians. Some sections are finding that they can grow the French or Petite very successfully but in choosing this variety we should be careful to get a desirable strain. Have the scions selected from trees of good vigor and producing the large type fruit. A few growers are finding the Standard to be an excellent prune, while some others do not like it at all. The Tragedy is of considerable value as a shipping fruit, coming earlier than the Italian. The Epineuse if it can be pollinated better would prove a

very valuable prune. Its superior quality, and large size make it attractive.

The northwest should give more interest to shipping plums, more of the early Japanese type should be selected such as the Santa Rosa, Formosa, Climax, Wickson, and others too numerous to mention. The canneries are taking larger and larger quantities of canning plums, among these are the Damson, Green Gage, Bavay, Shiro, Yellow Egg, Silver prune, and Peach plum. are the Da Shiro, Yello Peach plum.

Cherries Are Profitable

Cherries Are Profitable

The cherry business when properly conducted is proving to be tremendously profitable, especially is that true where varieties like the Royal Anne, Lambert, and Bing are produced, under right conditions, namely good pollination. The long stem Waterhouse, is a splendid pollinizer, for these varieties and is a fair canning cherry. The Black Republican is a good pollinizer and a shipping cherry. We need to grow more sour cherries. The two best are the Large Montmorency, and the Early Richmond, known locally as Kentish. These cherries are being used in the jam and jell trade. The extracts from their seed is valuable in producing cherry flavors and they can be used for maraschino purposes.

It is interesting to note that as far as maraschino business is concerned, that a few years ago the Royal Anne was the only cherry produced. Today maraschino manufacturers are getting splendid results from not only the Royal Ann, and some of the sour cherries but even varieties like the Ring, Lambert, and Black Republican are of value. A splendid maraschino is now being manufactured in large quantities from Bings.

Walnuts and Peaches

Walnuts and Peaches

The walnut should come in for more attention. Fine strains of Franquette and Mayette are to be preferred. Of the Mayettes, there are several very desirable strains such as the Wiltz and the Sturgis. The Filberts should receive some attention. There is every indication that western Washington and western Oregon within the next ten years will develop from 10,000 to

20,000 acres of filberts. The Barcelona will be the backbone of the industry with the DuChilli holding second place. The DuChilli pollinates the Barcelona but the Barcelona does not pollinate the latter. A few trees like the Daviana, Clackamas or Turkish are probably desirable.

The peach record of the northwest has not been an enviable one. When we have large crops we do not make very much money. The next year we have perhaps no crops at all and of course do not make money. The trouble has been that we have been growing too many varieties which are soft and which have a home value only. Varieties which are not adapted for canning and drying or for preserving. If we are going to develop a peach industry in the northwest we must plant those varieties which have qualities which attract the cannery men and preserve manufacturers such as clings, the Heath, Phillips, and Tuscan. Probably we could use the Lovell and the Muir.

Small Fruits

Small Fruits

Of the blackberry, the Snyder is our earliest berry and for that reason brings a very good price. At least it is the earliest one which is a good producer. The Kittatiny on the other hand is a very heavy producer and when well taken care of, well irrigated, will often produce the second crop. For Blackcaps, for which there is an increasing demand in all our canning factories, the Plum Farmer, Munger and America seems to be the favorites. For red raspberries, the Cuthbert and the Red Antwerp are about the only ones used. With the Red Antwerp increasing in favor, because they are a heavier producer than the Cuthbert and are now bringing practically the same price.

In our plantings let us not overlook the strawberry. The northwest has had a shortage of strawberries for five years. We not only lack plenty of good table varieties like Clarke's Seedling Magoon, Oregon, Marshall, etc., but we lack canning varieties like Ettersburg No. 121 or Trebla, and we can undoubtedly, especially in our coast districts grow more of the everbearing varieties. \$1,300 to \$1,500 an acre has been taken off of these varieties this year from some of our coast districts. The preferable varieties are Progressive, Superlative and Americus.

Northwest Fruit Notes of Great Interest

ING Products Co. which operates a plant at Salem, as well as at The Dales, Oregon, has recapitalized Salem plant up to \$500,000; a banquet recently given by the company to d the leading business men of Salem, gon, with the exception of the meat, at and butter, all the products served a elaborate banquet had been dehyded. The guests were enthusiastic over quality of the products shown. This many is launching a mational advertiscampaign and will spend \$250,000 this ling year. They are putting out a size product of great merit. The Company which operates two logan-juice plants and a jam and jell plant lem and a large juice plant at Olympia which they are manufacturing the ma Phez products, recently recapidated and extended their activities. They also spend this coming year a quarter million dollars in advertising. They acquipped what is probably the finest and jam plant on the Pscific coast, at m, Oregon.

the Eugene Fruit Growers' Association the has the finest co-operative cannery restern Oregon, is enlarging their acties. They have recently built a confire proof canning and storage plant, have bought out the local ice and ice in factory. This concern is doing it a million dollars' worth of business, ddition to operating the cannery which is of the largest in the state, they operating the grant processing at a Vinegar works, a spray factory, rown box factory and own their own ber. J. O. Holt is the efficient manager his organization.

he Oregon Growers' Co-operative As-

By C. I. Lewis, Associate Editor

operating in western Oregon has already signed up over 10,000 acres and has over 400 members enrolled. Their active campaign did not start until early in July.

Mr. Robert C. Paulus, manager of the Salem Fruit Union, Salem, Ore., has made a great record of sales this past year. Cherries of all varieties brought 10½ bulk, with a 10% tolerance allowance for imperfect fruit. The Bartlett pear pool brought \$85.00 the finest sale in the Northwest. The dried loganberries averaged from 72c to 75c bringing growers over 12c a pound fresh. The finest price obtained in the state for large quantities. Prunes will average the growers better than 18c for the large sizes, in addition to this they will share in the packing profits. The union recently made a sale of 1,800 pounds of the siftings of loganberries to an extract company for 45c a pound. A number of years ago this product was waste. This concern did over one million dollars worth of business last year with an overhead of \$16,000, or 1.6%, a remarkable record and a tribute to the efficiency of the manager and board of directors.

Dr. Ira Cardiff who has been operating an apple evaporating plant for a number of years at North Yakima has added two new plants in the Inland Empire, establishing plants at Wenatchee and Walla Walla. Dr. Cardiff was originally director of the Washington State Experiment Station. The effects of his scientific training are shown in the plants which he operates. He emphasizes organization, economic machinery and sanitation.

vallis, Oregon, has issued Bulletin No. 162, entitled, "Pear Harvesting and Storage Investigations, in the Rogue River Valley." This is the second report of the investigations. The first report known as Bulletin No. 155, treated the work accomplished in 1917, the bulletin just off the press gives results for the season 1918. Work has been continued through 1919 and will soon be published. Booklet No. 162 will be of interest to every pear grower. A few of the points brought out in this bulletin will be of interest to our readers at this time.

Northwest. The dried loganberries averaged from 72c to 75c bringing growers over 12c a pound fresh. The finest price obtained in the state for large quantities. Prunes will average the growers better than 18c for the large sizes, in addition to his they will share in the packing profits. The union recently made a sale of 1,800 counds of the siftings of loganberries to an extract company for 45c a pound. A number of years ago this product was waste. This concern did over one million dollars over the dollars of the will be of interest to our readers at this time.

It has been observed that Bartlett pears increase gradually in size but at an accelerated rate in volume throughout the growing season. This is true regardless of climatic or cultural conditions. The linear enlargement and transverse diameter of the fruit is proportionately faster throughout the season than the longitudinal enlargement. Investigations would seem to indicate also that seeds have an influence on the form of pears.

One of the most interesting things in this bulletin will be of interest to our readers at the stime.

It has been observed that Bartlett pears increase gradually in size but at an accelerated rate in volume throughout the growing season. This is true regardless of climatic or cultural conditions. The linear enlargement and transverse diameter of the fruit is proportionately faster throughout the season than the longitudinal enlargement. Investigations would seem to indicate also that seeds have an influence on the form of pears.

One of the most interesting things in this bulletin will be of interest to our readers at the sum of the season. This is true regardless of climatic or cultural conditions.

The fruit is proportionately faster throughout the growing season. This is true regardless of climatic or cultural conditions.

One of the most interesting things in this bulletin will be of interest to our readers at the sum of the fruit is proportionately faster throughout the fruit is proportionately faster throughout the fruit

average gradual lowering in resistance of half a pound a day. To get the best results the tests are made about six hours after picking. The same test was given to Bosc with the same results.

As regards some of the storage results with pears, the following is of interest. As in the previous year, it was found that in no instance was size of the fruit a factor in ripening and decay, that is, the small pears on the tree are just as mature as the large pears. Pears picked during the middle or latter part of the season keep-slightly longer in cold storage than those picked early. The early picked fruit is decidedly inferior in quality to that harvested on later dates, and high temperatures accompanied with high percentage of humidity seem to prevent the best ripening of early picked Bartletts. A strikingly good keeping and eating quality was produced where the picking was late in the season. With the Bosc it was found that fruit picked very early in the season must be permitted a partial ripening before being placed under low temperatures. Delay of at least two weeks seems to be essential for Bosc put in cold storage. The higher the humidity, the leas time required for delay. Of twelve methods used in storing Boscs, the following were found to be the best, common storage, car temperature storage and delay of 14 days followed by car temperature for 12 to 15 days and then in cold storage. The bullatin contains many interesting diagrams, tables and photographs. The work is a distinct step forward in the physical handling of pears.

The housewives of Seattle, Wash., have third to be the season of Seattle, wash., have third to be the season of Seattle, wash., have third to be the season of Seattle, wash., have third to be the season of Seattle, wash., have third to be the season of Seattle, wash., have third to be the season of Seattle, wash., have

The housewives of Seattle, Wash., have decided to incorporate The Home Keepers' All American Market, for \$50,000. They will open their own market and wrestle with the cost of living.

Ofter asimsanv

Protection - Legal Advice - Adjustments

Have You A Membership in the American Fruit Grower **Protective League**

EMEMBER a membership is given with a two-year sub-scription to the AMERICAN FRUIT GROWER for only \$1.50. You cannot afford to stay out of this protective league for so small a sum. Every farmer and fruit grower should join this League and also tell your neighbors and friends about our protective league and have them join.

STICK TOGETHER—IN UNION THERE IS STRENGTH

Details of Service Rendered By the League

A leading feature of the AMERICAN FRUIT GROWER PROTECTIVE LEAGUE'S work will be to drive out crooks and sharks who prey upon fruit growers and farmers through various schemes and deception and fraud. Members who are thus victimized are urged to notify the League and to make use of the service of the League, with a view both to a recovery, when possible, and the frustration of further attempts along that particular line.

Another feature of the work of the AMERICAN FRUIT GROWER PROTECTIVE LEAGUE, that should prove valuable to our subscribers, will be the prosecution of claims of members of the League, arising out of shipments of fruits, produce, etc. Claims of all sorts resulting from delayed or lost shipments, stealing of fruit, freezing, negligence in billing and handling, will be taken care of through the service of this branch of the League.

A legal department will be conducted through the columns of the AMERICAN FRUIT GROWER. Legal inquiries only will receive the attention of this department, and all such inquiries will receive prompt consideration. It is not intended that this department shall supplant the local attorney. If the matter presented is of such a nature as to call for the services of a local lawyer, the member will be so advised. Only such legal questions as are of general interest to the readers of the AMERICAN FRUIT GROWER, will be published in these columns. Personal matters, not of public interest, will be handled by correspondence direct with the member. All inquiries must be signed by the inquirer, otherwise no attention will be given to the inquiry.

Why All Fruit Growers Should Join the League

Every fruit grower can qualify for membership in the AMERICAN FRUIT GROWER PROTECTIVE LEAGUE and ought to join this League. He should avail himself of the service which the League affords.

avail himself of the service which the League affords.

There is hardly a fruit grower or farmer anywhere who, during the coming year, will not find himself in need of service along one or more of the lines referred to. He may need assistance in collecting a claim against a common carrier or commission man. Perhaps he will need some advice concerning the law involved in the various items with which a fruit grower and farmer is concerned and of his rights therein. He can write to the League and procure the required service. The operation of swindlers may affect other members, and the League will be bulwark against such fraudulent schemes and deceptions and serve to curb their activities.

A vital reason for the affiliation of fruit growers and farmers with the League is that in union there is strength. If we will stand stanchly together it will profit us all. The stronger this League becomes the more protection will be afforded to every member and the more secure in their rights will be the fruit growers and farmers of America. You will help not only your own interest by joining the League, but the interest of every other fruit grower and farmer also.

What You Get With Your Membership

2-Year Membership Certificate in AMERICAN FRUIT GROWER PROTECTIVE LEAGUE 24 Monthly Issues of the AMERICAN FRUIT GROWER 1 Handsome League Membership Button 1 Enameled League Gate Sign I League Rubber Stamp and Pad

Send In Your Subscription and Become a Member

It is easy to become a member of the League. Send us \$1.50, for which you will receive a two-year sub-scription to the AMERICAN FRUIT GROWER; a two-year membership in the AMERICAN subscription to the American FRUIT GROWER; a League Membership Button; a League Gate Sign; a League Rubber bank button; button; a League Gate Sign; a League Rubber bench button; button

DO IT NOW

American Fruit Grower Protective League

THE LEGAL department is a feature of the service rendered by the American Fruit Grower Protective League to its members. Legal inquiries only will recieve the attention of this department, and all of such inquiries will receive prompt consideration. It is not intended that this department shall supplant the local attorney. If the matter presented is of such a nature as to call for the services of a local attorney, the subscriber will be so advised. Only such legal questions that are of general interest to the readers of AMERICAN FRUIT GROWER will be published in these columns. All other questions will be answered direct by letter to the inquirer. Personal matters not of public interest will be handled by correspondence. All inquires must be signed by the inquirer, otherwise no attention will be given the inquiry.

The Law of Contract

The Law of Contract

The Law of Contract

Contracts constitute a branch of the law about which more litigation and difficulty exist than perhaps all else combined. We are making contracts every day—not written contracts, but verbal or implied contracts. We often think of a contract as a scrap of paper with writing on it and signed by the parties. But of course, a contract does not have to be in writing. One could have bought the finest lot of fruit at the State Fair by word of mouth and the agreement would have been just as binding as if executed with great formality.

ity.

It must not be forgotten, however, that contracts of a certain kind are required to be in writing. What the lawyers know as the Statute of Frauds makes this necessary. be in writing. What the lawyers know as the Statute of Frauds makes this necessary. Agreements made in consideration, but not in contemplation or expectation merely, of marriage are required to be in writing. Promises by executors and administrators must be in writing. Promises to answer for the debt, default or miscarriage of another must be in writing. Agreements not to be performed within a year must be in writing. Agreements affecting the title to and interests in real property must be in writing. All other things may be contracted for and about orally. Now this does not mean that it is desirable to leave our transaction to oral negotiation. Indeed, one of the prime needs of the fruit grower is to reduce histransactions to writing. It would establish the fruit business on a business basis. It would enable the fruit grower to know what he is doing and where he is at all times.

There are a few things necessary before there can be a contract. If any of these are absent then there is no contract at all—even though the other elements are present. There must be an offer, and an acceptance of that offer. That is, there must be a meeting of the minds of the parties. One person must offer to do something and another person must take him up on his offer. If there is no offer there can be no acceptance of that offer. If there is no acceptance of an offer that has been made, there is no contract. The acceptance must be in the exact terms made in the offer, one man may offer to has been made, there is no contract. The acceptance must be in the exact terms made in the offer, one man may offer to sell a lot of apple trees for one thousand dollars and another may be willing to pay him nine hundred. Of course it is plain that there is no contract. There are just two offers and no acceptance of either offer. The closer cases come when the second man writes back and says, "I'll accept your offer and give you one thousand dolars for your apple tree, but I shall expect you to send a man along to help plant them." Now if he means that he would like to have the seller send a man along, but that he is going to buy the trees anyway, then there is a contract, but if he makes it a condition of the sale, then there is no contract and he must wait to hear from the first party to see whether he will accept this new offer.

Then before there can be a valid contract there must be competent parties. Insane persons and infants in most cases, for instance, cannot make binding contracts. Agreements made with infants, except for necessities, are voidable, that is, the infant may decide not to be bound by his agreement and he cannot be compelled to perform. A person making a contract then must always be on his guard to see that the other party is competent to make valid a contract.

There must be in every contract a wild subject matter. A contract made by a contract mater in a contract made by a contract mater in a contract made by a contract material man with an unscrupulous judge of fruit at a fair to award the prizes to the fruit man is not enforcible. That is, it the judge is to get a certain sum of mony provided he makes the awards to the owner, and he does so, he cannot the bring an action to compel payment.

Consideration to compel payment.

Consideration is the other element accessary to a good contract. In return for the promise of one party the other puty must pay something or do something. He must give up a legal right of some ind. The consideration need not be fair or adequate. One may give only fifty dollar for a horse worth three hundred and still would be an enforcible contract. The consideration passing from the promissor may sideration passing from the promissor may be a good thing for him who gives it we would be an enforcible contract. The casideration passing from the promisor my be a good thing for him who gives it mand yet it would afford sufficient consideration for a valid contract. A mobining that the sufficient consideration for a valid contract. A mobining that the sufficient consideration for a valid contract. A mobining that the sufficient is the refrains from late parties. The daughter refrains. The contract becomes binding upon the mother, for the duplet gave up a legal right. If a father agrees the give his son a gold watch when he result twenty-one years and the son attains that age, then should the father refuse to comply, the son has no right of action. He gave up no legal right.

Offer and acceptance, competent paties, legal subject matter, and consideration—these are the elements that must be in an agreement to make a valid contract.

L. P., West DePere, Wisconsin, write-

L. P.; West DePere, Wisconsin, w My neighbor's apple trees have branch protruding over my land. Some of trees are on the line and others are no the line, upon his land. Can I compel in to cut down these trees or else sue him for damages?

One adjoining land owner cannot mis-tain an action against another for their trusion of roots or branches of a tree in or over his land. His only ramedy is lop off the branches. If the trunk da tree is upon the line dividing the land adjoining owners, it is common property of both and may be removed by dis-

C. V. L., McLeansboro, Illinois, with What is the law in Illinois with reference to line fences. I have built a new fence between my neighbor's land and my own own my half of the fence. Can I compel him to put up his share, on which there is scardy any fence at all?

any fence at all?

You may compel your neighbor to each his share of the fence. The Illinois law provides that adjoining owners mut maintain just proportions of the division fence between their lands. Such fence must be 4½ feet high, and in good reproductions of rails, timber boards, store, hedges, barb wire, woven wire or whatever the fence viewers regard equivalent that to, suitable and sufficient to prevent cattle horses, sheep, hogs and other stock from getting on the adjoining lands of another if your neighbor refuses to build such fence then take it up with your feast viewers. If they find the facts as you state, they will order your neighbor is build a just proportion of the fence. He still refuses, the fence viewers will can the fence to be built and charged up to the delinquent owner.

J. C. P., Palisades, Colorado, write My sister is a resident of Illinois but a mortgage upon porperty in Colorado this mortgage taxable in Illinois?

Your sister will under the laws of llines be required to list such a mortgage as you describe for taxation and to pay taxathereon the same as if the mortgage were on Illinois land.

H. P. L., Morgantown, West Virginia

Please advise me concerning the lish of a railroad company for loss in a ship of cherries. The cherries were in good when shipped but due to delay of 48 be in transit there was a heavy loss from cayed fruit.

As a general rule, where the destriction of or injury to the goods due to the herent nature and qualities, or distriction, the carrier is not liable if his negligence did not occasion or control the injury. But in this the liabil the railroad company clearly estably the delay of two days in shipment cherries.

t Grower

contract a valid ct made by a conscrupulous judge the prizes to the ble. That is, it in sum of many awards to the he cannot the

her element sect. In return for the other party to something. He art of some ind. not be fair or only fifty dolar nidred and still it atract. The one promiseor may who gives it up ficient considerate. A mother aghter something to parties. The outract becomes for the dughter father agree to when he reaches son attains that

competent purant considerate that must be a valid contract isconsin, write as have branches. Some of the others are not an I compet his else sue him for

er cannot mainther for the iness of a tree into y remedy is to the trunk of ing the land dimmon property oved by either the control of the co

Illinois, write:
s with reference
a new fence benew fenc

the Illinon law owners mut of the division. Such fease in good reparation to the control of the

Colorado. Il colorado. Il colorado. Il colorado. Il colorado. Il colorado en colorado en colorado en colorado. Il colorado

in a shipment in a shipment in good shape ay of 48 hours loss from de-

ne destruction e to their iss, or defets ble if his orn or contribute he liability of y established

With Our Editor

Let Us Know Your Wishes

ST. PAUL alone has enjoyed the distinction of being "all things to all men." None can hope to rival him, yet it is the duty of the editor whose first aim is to serve his subscribers, to imitate his example. We would like to meet every wish of each of our readers as nearly as possible and, since there is no way of knowing what you want unless you tell us, we ask you to let us hear from you.

Write us what you would like to add to the departments of the AMERICAN FRUIT GROWER. There may be some matter that you would be pleased to see touched on every month. Our magazine is growing larger and, if we can insert it, the subject you wish will be added. Or there may be something of little interest to you which you would gladly see sacrificed to make room for what appears to you more important. If we find that the majority of our readers hold the same view, we will gladly make the change.

What about the ladies? Is there something particularly dear to a woman's heart that we have overlooked? If so, speak now. We cannot promise to carry out every one of your individual wishes, but we can and do undertake to give them due consideration and, where it can be done, to conform to your suggestions.

The Farmer and H. C. L.

THERE are more people in cities than in the country and therefore farmers are numerically in the minority and are bound to suffer some of the injustice that is the lot of minorities. It is quite the smart thing in cities to make jokes at the farmer's expense, to deride his poverty in one breath and in the next to shout aloud against the prices paid for his produce. We hear shrieks of dismay at the cost of eggs for instance, from persons who know nothing either of the cost of chicken feed or of the difficulty of raising chickens, on a farm where there are many things to do and little elp obtainable, and who takes no account of the part played by the middleman in conveying the eggs from the farmer to the con-

Probably the farmer in his turn does some injustice to the city man. We know that we groan over the price we are called on to pay for our shoes even when we are assured that leather is awfully scarce, but when we resign ourselves to economize in summer-time by wearing canvas shoes, it is surprising to find that the price on these has been raised in the same proportion. Maybe there is some occult connection between canvas and leather beyond the simple farmer's hen.

We do not deny that hard-working farmers are now prospering. So are men in every position who are willing to work. The present high cost of living has deeper roots than the simple wish of each class to get financially on top. Much' thought and trouble have been expended in the effort to solve the problem but so far we can only be

sure of one fact, which is that the country will weather the storm. Meantime, we cannot feel as sad over the price of fruit and eggs as we are over the price of shoes and clothes. It wouldn't be "human natur" to be so.

Concerning Curiosity

66 KEEP six honest serving men, They taught me all I knew, There names are What and Why and When And How and Where and Who."

Their child is forever poking into things that are no concern of his. His eternal questions interrupt our serious business. Besides they are foolish. Besides—aye there's the rub—we can't answer the half of them. But like every natural quality of man, curiosity has its uses. It is the frivolous cousin of worthy interest. Without it the child could not add so amazingly day by day to his little store of knowledge. Of course you, Mr. Grown Man, are superior to this instinctive inquisitiveness of childhood, and yet—

Yesterday, walking down a thronged city street, we observed a handsome limousine with curtains most mysteriously drawn, standing beside the curb. On tiptoe in front of it, climbing over the hood, venturing round on the far side at imminent risk of being mangled by the traffic, was a peering crowd. For heaven's sake! what can the matter be?

We have no intention of revealing what position of danger or ridicule we ourselves assumed. Anyway, we were only trying to satisfy that daughter of Eve who is our constant companion. Just as we succeeded in staring into an absolutely empty interior, we were rudely thrust aside by another man in search of knowledge, but not before our eyes had encountered at the opposite peephole the hastily lowered glance of a sedate member of our staff whom we had left suitably occupied at his office desk.

When we regained the sidewalk the lady laughed heartlessly. Yet there might have been something interesting and altogether new behind those closely drawn curtains. So there'll be a similar crowd of highly intelligent gentlemen next time, and tomorrow we'll still be saying to the boy, "Johnnie, for the love o' Mike don't be so inquisitive."

A Modern Farmer's Advantages

the farmer has two sources of information, actual personal experience and the experience of others. Actual personal experience is necessarily limited by a number of factors, but our knowledge may be wide if we avail ourselves of all sources of information open to us. The first, and pretty much the only aid that a farmer could formerly count on outside of his near neighbors, was books. A great mass of valuable information has for centuries been thus scattered abroad. Today, more than ever, such knowledge is available to the farmer, but, almost more important than this, his

SUM BOARD TO LAND TO SERVICE AND A SERVICE A

touch with other farmers is immeasurably closer and yet much wider spread than in the days before automobiles.

He hears of some man who specializes successfully in a line that interests him particularly. Off he goes in his car and calls on that expert. What he learns on this visit may mean many dollars to him. Or he joins his agricultural society in one of the farm tours now so general and so enlightening. He may attend farmers' institutes, hitherto unknown, or agricultural colleges, which our fathers never heard of. Last, if he live in a progressive state, he may gain much by making full use of the experiment station which has been established for his especial benefit. Here he may carry his every puzzling question and profit by the practical experiments which were too expensive for individual testing.

To use a good, old Scotch word, the farmer is "canny," and it is hardly necessary to warn him against jumping to hasty conclusions, or against accepting suggestions or so-called proofs from any quarter, without first making sure that the source is reliable. With all the advantages that are now his, it would be strange indeed if farming failed to assume the dignity of a science or if the farmer should not be recognized as taking rank among professional men.

Fire Insurance For Farmers

SIX BILLION dollars looks like a big sum even at this time when war figures that used to stagger us have made enormous numbers as familiar as the thousands and tens of thousands of biblical times. \$6,000,000,000 is the big sum carried by 2,000 farmers' fire insurance companies. That such companies are in the large majority stable and valuable is proved, not only by the 2,000 organizations, but by their wide distribution. Only five states—Florida, Louisiana, New Mexico, Arizona, and Nevada are now without them.

The Department of Agriculture, Washington, D. C., has brought out Department Bulletin 786, which is a report upon such companies as have sent in replies to certain questionnaires. It is evident that, while much benefit has been derived from these companies, there is the drawback of lack of uniformity in plans and practices. Reasons for urging greater uniformity are made plain to any intelligent group of farmers, when it is pointed out that "the general public would be more easily convinced of the soundness and value of such companies as a class, the approval and support of the insurance department of the state would be more easily secured, financial institutions which lend money to farmers would more readily accept the policies of these companies as collateral, and lastly the companies themselves would find it easier to co-operate with one another."

Some interesting data gained from the questionnaires, are that the smallest company reporting has 25 members as against 32,433 members for the largest.

The Value of Shrubbery

on "Landscape Gardening," free upon request. To secure a free, individual planting plan, send us a rough sketch of your home frounds showing location of buildings. State size of area to be planted and what amount you contemplate spending on shrubs, etc. Address Mary Lee Adams, American Fruit Grower, Chicago.

IN STARTING to improve our home grounds, we should at the outset take into account that the mental eye, to which our final appeal of beauty is made, differs from the physical eye. The old adage "Beauty is in the eye of the beholder," well expresses the truth that, while with the normal physical eye of all we see the same line and color, yet what touches the imagination of one may pass quite unfelt by another less perceptive.

ceptive.

Do not, therefore, make the mistake of thinking that the more one sees the better the impression. There are too many places where everything has been sacrificed to an unobstructed view. This is fundamentally wrong. Climb a tower if you wish to overlook everything. When you have done so, the panorama will be less pleasing and, strangely enough, look less extensive than the more restrained glimpses you had between clumps of shrubs or branches of trees.

tween clumps of shrubs or branches of trees.

We may know accurately the limit of our property yet, if the sight is checked before that limit is reached, the mind's eye unconsciously wanders far beyond it. Fancy, given free rein, always outruns fact. Herein lies the secret of the allure of a black eye glancing beneath the harem veil and suggesting beauties which mayhap do not exist, and herein lies one of the chief charms of trees and shrubs which with their magic veiling please by what is shown and stir the imagination as to what lies beyond. Have you felt the thrill of a brilliant sunset gleaming through the dark boughs of a pine wood? It made you long to see that shining sky in its entirety. Tet, when you ran breathless to the open, the contrasted light and shade were gone and the brilliance which had seemed rare and splendid was shown as a mere ordinary glow. How Shrubs Help a Place

How Shrubs Help a Place

A place that is aggressively bare affects the nerves like freshly cut finger nails. It is edgy and raw. Trees and shrubs will mellow it quickly. They will also do the kindly act of screening unsightly objects. In a long-settled home, the location of such objects is often fixed, but new homes are now generally planned to do sway with disfiguring outbuildings and to compose them into one harmonious group with the main building or dwelling.

In choosing shrubs, it is well to select a fair proportion of evergreens as screens from wind in winter and from ugliness at all season, and also because they do so much to alleviate the bareness of the leafless months. In summer they furnish fine contrast with other foliage, but in winter they become a source of distinct cheer. There is no reason for the home grounds to look forlorn at any season. Nothing, to our mind, can quite take the place of the evanescent loveliness of flowers, but with evergreens, berried bushes and bright stemmed trees and shrubs, there is much color to be found and enjoyed the year round. We are just entering upon the season of the dead leaf and the ruined flower bed. When you look out of your window each day between now and spring and your eye meets no gracious foliage, stem or berry, you will be disposed to take steps to avoid the repetition of such a dreary experience.

Use Native Material

Use Native Material

While the nurseries can come most usefully to our aid in furnishing the planting for our home grounds, there is no reason for those who cannot afford to buy largely, to give up the idea of making their grounds attractive. In almost every place native trees and shrubs can be found which are entirely satisfactory for the purpose. Some of the most ornamental have a wide natural range. Dogwood has few rivals, judas tree, with its pink flush through the spring woods, is as delightful a bit of color as could be hought. Rosy wild crab apple and wild lilac, fringe tree and hawthornes, with too many more to mention, cost only the digging.

Most of us will want some nursery shrubs and, if only a few can be bought, get them and add to them from time to time. This is perhaps the safer way for the amateur as no big mistakes can be made all at once when one goes slowly, and it is not a great undertaking to transplant a few shrubs which time proves to be misplaced as, for instance, when they threaten to interfere with a pretty outlook or to encroach too much upon the lawn.

If you read the previous articles in this department, you will have found that the accepted ideal for a lawn is to keep it open rather than cut up by flower beds or spectmens. You may also recall that you have been urged to hesitate before cutting down a tree of any consequence. A fine tree is a noble sight and it takes longer than we can linger here to see it grow to perfection. A single beautiful tree or group of trees upon the lawn, should by all means be spared. Perhaps we would not have planted it there, but being there let us reverently leave it and, as is often possible, turn the obstacle into account by trying to weave some particular charm about it which may make of it a most attractive feature.

Grass, as a rule, does not flourish so well in the shade, and the roots of great trees take a lot of nourishment from weaker growths, yet there are grasses specially adapted to shade and, if it be too deep for even these to grow, there is the resource of some ground cover which may be evergreen as well as beautiful. An ivy mat beneath an old tree is full of association and there are several other lovely evergreen ground covers.

Lay Out a Plan First

If the planting of a thoroughly good shrubbery seems to you simple, just pause a moment to think of the many considerations that enter in and make of it a complex problem. When you have taken everything into account you may feel that the task you were ready to undertake so lightly is beyond your skill and that, if you cannot afford to employ a professional landscape architect, you might just as well let it alone altogether. Here you would be making just as great a mistake as in thinking it easy or in doing it carelessly. If you are a subscriber to the AMERICAN FRUIT GROWER, you have the opportunity to make use of our offer of free landscape plans.

plans.

If you do not wish a special plan and are in doubt about any particular thing, such as season of bloom, time to plant, suitability to climate, etc., you have only to write to a reliable nursery man to get the desired

as season of bloom, time to plant, suitability to climate, etc., you have only to write to a reliable nursery man to get the desired information.

Now let us consider some of the things we might profitably plan out this winter as we sit before our glowing hearths and dream of spring. If we have a lawn, we will wish to surround, or at least partially inclose it with shrubs and trees. We know that some flowering shrubs are at their loveliest when set against the dark of evergreens, and that groups of trees are invaluable in the background both as setting off the shrubs and as giving variety to the sky line. We must consider suitability to climate, to the location or position, to the style of our dwelling, and to the flowers with which we may wish to border the shrub planting.

We want to plan so that the best view may be seen through the shrubbery and the worst concealed by it. We do not wish to obstruct windows, particularly those that have a pleasant outlook. We must think of varying the height and depth of the planting, which should encroach irregularly upon the lawn or run true to line on a bordered path; of furnishing a variety of diverse yet harmonious foliage, so that small individual groups forming a complete unit may be interwoven as part of a homogenious whole.

Successive seasons of bloom should be considered, so that there may be some flowering shrub throughout the blossoming year, and the color relations of such as are set close together and bloom at the same season, must accord as well as be intrinsically charming. Harder still to hold to as we sketch out our planting plan, we must occasionally sacrifice the loveliest in favor of something more suitable, for it is not always that the most beautiful is best for the effect of the whole.

Their Thanksgiving

Our readers are invited to write to us about matters pertaining to electric service as it relates to the country home. Let us have your questions on any phase of this subject. Address E. N. Cable, American Fruit Grower, Chicage.

E THOUGHT he couldn't stand it, big, strong man though he was, when the doctor laid the hand of the sleeping woman back on the coverlet and led him from the room.

"There's a chance if we operate at once," the doctor said, bluntly but not unkindly and after that things were hazy and indefinite. He could remember dimly



He Saw Her Standing on the Big Side Porch,

that an ambulance took her away up the lane, down the country road and so to the hospital in the nearby city. He felt sure she had smiled bravely at him when she opened her eyes for a moment before they bore her away from him. And he remembered the agony of those hours he had waited before they came out to tell him his wife would live.

Live! And come back to him!

The words sang in his brain and danced in his heart and a moment or two had passed before he realized that the good old doctor was addressing him.

"We're giving her back to you, John," he was saying, "but not the strong, active woman she has been in years past. She'll make a fine recovery and live to bless you for many years, I hope, but it's up to you to cherish her and guard her in ways neither you nor she have dreamed were necessary during the years you've lived together.

"Tell me what you mean, Doc," the husband spoke.

The Doctor's Warning

The Doctor's Warning

"It's this. The present trouble wasn't a chance affair, but it came about as it has in the lives of so many farmers' wives, from overwork—from trying, each day, to crowd into that day just a little more work than an ordinary day is intended to ac-

commodate. Result, something snap, there's a breakdown of one sort or another and a long and tedious period of getting back a part of the lost health. That, what confronts you now. You must make it easier for Fanny," he had known her and called her thus from her girlhood, "you must make it easier," he repeated, "for her to do what work she is bound to do it she stays on the farm.

"You can do that, and still live on the farm," the doctor went on, "but it will mean the adoption of all possible laborsaving devices known to the modern home anywhere—now don't get scared"—he smiled encouragingly—"you can have ture of only a few hundred dollars,

"Electricity opens the way to most all the modern features that homes can have anywhere and I consider it one of the greatest blessings accorded modern humany, the possibility now presented to farmen to have electricity and its advantages on the farm.

"Now you look around," he concluded

"Now you look around," he concluded as he left the overjoyed but bewilden farmer, "look around and see what you



can do toward getting her home make over by the time we're ready to send he

home."
And then John got busy. A laber of love! He had known there was a sunthing that someone had given that name, but he had never realized it in his own life so much as he did when he started in the follow the doctor's commands.

Decides on Electricity

First he ordered one of the small, individual electric plants, a simple alias that the wife could start and operate, as that would furnish an abundance of extricity for all the needs of their home.

(Continued on page 23)



Will Mean the Adoption of Every Labor-Saving Device Known to the M

Y use of Goodyear Cord Pneumatic Truck Tires shows me that pneumatics not only travel better on our clay roads but also are better for the roads. Solids have a hard time in the soft ruts and they are hard on the roads. I have observed that others here are taking note of this."-A. J. Emmerton, Farmer, Bloomer, Wisconsin

HERE is scarcely any work done on the Emmerton Farm, near Bloomer, Wisconsin, that is not aided directly or indirectly by a motor truck on Goodyear Cord Pneumatic Truck Tires.

Their traction and cushioning enable this truck to haul fertilizer over plowed ground, to carry feed to livestock wherever located, to deliver oil to tractors and to distribute fencing.

For the same reasons the truck

easily transfers corn from binder to silo filler and grain from separator to bins—all off-theroad work.

Mr. Emmerton's experience, however, equally emphasizes the advantage of the Goodyear Cords over solid tires on the local clay roads, noting that the pneumatic-shod truck overcomes conditions impassable to solid-tired trucks.

Still another important significance attaches to his statement that the pneumatics are regarded with growing favor in the surrounding community because their cushioning action saves roads.

It prompts the observation that this particular virtue of Goodyear Cord Pneumatic Truck Tires also is a factor in their rapid and broadcast rural adoption.

The Goodyear Tire & Rubber Co. Akron, Ohio



NK-TYPE TRACTOR



Wherever there are Orchards there are Cletracs

Fruit growers everywhere recognize the Cletrac as the standard orchard tractor.

It gets in close to the tree trunks without damage to branches, blossoms or crop.

It turns so easily and so short that you can readily work around trees, bushes and fence corners.

And because of its tank-type of construction you can safely drive it on side hills—where ordinary tractors would be in danger of turning over.

The Cletrac goes over rough uneven ground, sand or soft plowed soil without floundering, without packing down the surface, without using a lot of extra fuel.

It burns kerosene, distillate or gasoline but is specially designed to use kerosene.

Its power goes into drawbar pull. None of it is wasted to push the Cletrac through the ground. It runs on top, on its own tracks, like a locomotive.

The Cletrac plows and cultivates faster, better, cheaper than animal power-and does it more days in the year than the ordinary tractors. It is just the thing for hauling the spraying apparatus, or the wagons in loading season.

It is the ideal orchard tractor—and because of its exceptional characteristics you will find the Cletrac wherever you find orchards,

Order your Cletrac today. It is a year 'round machine. Cash in on it now. An interesting booklet entitled "Selecting Your Tractor" will be mailed for the asking. Send for it. It answers all the puzzling tractor questions you have been asking.

The Cleveland Tractor Co.

18935 Euclid Avenue Cleveland, Ohio Largest producers of tank-type tractors in the



Just a Smell of Apples

RECENTLY visited a sick room where a number of stricken aged women were housed and cared for in our poorhouse hospital, better known as the county hospital. I had in one hand an orange and in the other an apple. The old lady in the cot nearest the patient I called to see remarked that the fruit smelt good. Later she asked if she could take it in her hand and smell the fruit at closer quarters. I thought she had reference to the orange, which was more fragrant than the apple. "No," she cried, "I want to smell of the apple." She seemed to be satisfied with the smell of the apple while her neighbor ate it. Its fragrance carried her back many years to her home in the country, to the fields and orchards she so enjoyed in her girlhood with her many friends of long ago.

Dehydration of Fruits

Dehydration of Fruits

Much has been written in regard to this seemingly new process, but I have yet to find that any writer has described fully the process of dehydration. This is the trouble with many writers. Some times they do not know what the process is. At other times when they do know they make the mistake of supposing that everybody else knows. The earliest process was called the drying of fruits. This was generally done by exposing the fruit to the sunshine and at the same time to the wind, blowing various kinds of germs upon the fruit, and subjecting it to the attacks of insects. The next great improvement was in the evaporation of fruits in crude evaporators with stationary trays so arranged that the ascending heat passed under and over each tray until it escaped at the summit.

The next improvement was in the endless chain method of elevating the fruit trays and keeping them continuously traveling up and down and over the furnace heat below. By this process the original color was more naturally preserved and the fruit met with a ready sale.

As I understand, the newest form, that is dehydration, is a process by which the fruit is exposed not only to heat but to dried hot air, driven by force of a fan over the fruit. By this method the fruit or vegetables are cooked as well as evaporated. In other words, dehydration is simply an improvement on evaporation, thus producing a more valuable product without greatly increasing the cost. The new process claims to preserve fruit with nearly all the original flavor. color, texture and succulence.

Reply to Orchardist

Dear Sir—I am asked to answer your letter. My advice is that undertakings be begun moderately except in cases where large cash capital is available. I often felicitate myself on the fact that having a limited capital when I started the fruit growing and nursery business, I felt compelled to start in a small way. My mistakes were small. I gained daily by experience.

takes were small. I gained daily by experience.

Orchards are slow in coming into bearing with the exception of the peach, cherry and dwarf pears. Apple orchards are notably slow in coming into fruition, therefore there is always danger when a man starts with limited capital.

I am often asked why certain fruit trees do not come into bearing sooner. The owners are almost discouraged over the fact that the trees should have borne fruit years ago but have not done so. This question is more often asked me as editor than any other. I have known thrifty apple orchards to remain barren years after the date when they should have borne fruit. For the most part these orchards have been located on lowish ground where rampant growth has been encouraged by moisture and fertile soil. Rapid growth is not conducive of early fruiting. I never advise my friends at the east to plant orchards on low lands.

Nut trees are particularly slow in comminto bearing. They are often also slow growth. The man who plants a nut of chard is in fact planting for a future generation, therefore he should have ampocapital. A friend of mine planted a lappecan orchard in Louisana and was on tinually embarrassed for lack of capital keep the thing going, and yet many of these bore fruit at an early age. He holicods in the Mississippi river to contend with and the boll weevil, which prevented a growing cotton between rows of nut tree. I should be slow in investing money orchards of any kind for other men than age, since management is everything.

Land Planted to Apple Trees

A gentleman from England writes for formation as to where he can buy applearing land or land planted to apple tre His address is Mr. J. Marsh, 119 Anfa. Road, Liverpool, England. My answer as follows:

There are different fruit helts in A.

Road, Liverpool, England. My answer as follows:

There are different fruit belts in the United States and Canada. One is also the south shore of Lake Ontario in New York state, the other on the northwester shore of Lake Ontario in Canada.

Another remarkably promising approximg territory is Charlottesville Albemarle county, Virginia, but I am no in possession of any particular lands is sale, planted or unplanted, and do a know who has. You will certainly have to come here and see the property personally and spend some time in so doing, book might be written on the subject you mention since it is so important that you make a wise selection. A difference of few miles in location might make a vidifference in the revenue from the orchantyou purchase or plant.

Tell It in Flowers

Many years ago in the days of my youl I became deeply interested in a besutif and talented young lady. Desiring to in press this young lady with my admirate for her, though I had known her but short time, I presented her with a besutiful and what at that time seemed to meet be an expensive bouquet of flowers.

Is there any more effective way of a pressing our admiration for anybody anything than through flowers?

The lady in question is now gray him. She has forgotten what I said to her many years ago during my frequent cupon her, but probably she has never forgetten this little gift. Certainly I in never forget it and the giving of it doubt if a diamond ring or a gold wis could have expressed so much as did flowers in this instance.

If we express ourselves in words we ever in doubt as to whether we have ust the right words or whether we have ust the right words or whether we have ust the right words or whether we have any ourselves through flowers we will self make mistakes.

If a friend or neighbor has lost a low one who has gone to that undiscover country, a gift of flowers is appropriate if a friend is sick, floral gifts are welcom Flowers are appropriate on occasion gladness or of sorrow, as appropriate the wedding as for the anniversary abbirthday.

The United States Department of Approximations and the state of the anniversary abbirthday.

The United States Department of A culture received a statement from Antina that the apples shipped from catchee Valley, Washington, were thousuperior both to their own apples and other imported varieties. Eastern greens need feel no mortification that palm went to the northwestern application which are represented by many fine eites, while pretty much the only varieties while pretty much the only varieties while pretty much the only varieties, which is hardly considereven an "also ran" when quality is decised.

T PRECISELY the one moment in the world's history when the call for speed and economy on the farm was most mortally urgent—necessity produced the Midwest Utilitor. Simple, practically unbreakable, and requiring no expert handling, this sturdy little machine is already cutting down food raising costs and speeding up production beyond anything we have ever claimed for it. No man with a truck garden or farm, of whatever size, can ignore the logic of the Midwest Utilitor. It takes five acres of land to maintain a horse—the Utilitor works ten hours on two gallons of gasolinenever tires—never eats—costs nothing when idle—and in a pinch, can go twenty-four hours.

On top of its use as a tractor, the Midwest Utilitor makes an ideal small stationary gas engine, for belt work, moving from one job to another on its own power.

It also, as far as we know, is the only so-called small tractor with a double clutch control. This does entirely away with tugging and straining and back-breaking struggle on the turns. Turning the Utilitor is merely a matter of manipulating two light, finger controlled, hand clutches—requiring no physical strength. Let the Utilitor dealer explain this point. If you don't know who your Utilitor dealer is, write direct to Sales Division R—for full particulars and detailed descriptive matter.

MIDWEST ENGINE COMPANY

INDIANAPOLIS, U. S. A.

Midwest Utilitor Plows, Harrows, Cultivates, Lawns, Pulls Small Loads, Saws Wood, Pumps Grinds Feed, Turns Grindstone, Runz Sep Washing Machine or Churn.

ependable Pe



Top Dressing Talks

When you get ready to buy nitrogenous fertilizers for orchards, truck crops, topdressing grass, corn, cotton or tobacco. let us tell you about

ARCADIAN Sulphate of Ammonia

Arcadian Sulphate of Ammonia is the well-known standard article that has done you good service in your mixed fertilizers for years past, now specially kiln-dried and screened to make it fine and dry. Ammonia 25 1/8 guaranteed. Made in U.S.A.

The Great American Ammoniate Arcadian Sulphate of Ammonia is For Sale By:

ALABAMA: Birmingham; Birmingham Ferti- MICHIGAN: Detroit; Solvay Process Co.

CALIFORNIA: San Francisco; Hawalian Fei dilizer Co., Pacific Bone Coal & Fertilizing Co Pacific Guano & Fertilizer Co., Western Mes Co., California Fertilizer Works, Los Angeles Pacific Guano & Fertilizer Co., Pacific Bon Coal & Fertilizing Co., Agricultural Chemics Works, Hauser Packing Co.

CONNECTICUT: Bridgeport; The Berkshire

EORGIA: Atlanta; Armour Fertiliser Works rift & Co., Tennossee Chemical Co., Athéna, apire State Chemical Co., Macon; F. S. Roy-er Guano Co. Americus; Tennessee Chem-al Co. Culloden; Culloden Gin & Fertilises

DIANA: New Albeny; Hopkins Fertilizer Co. KENTUCKY: Louisville; Louisville Fertilizer

LOUISIANA: New Orleans; Planters Fertilis

ASSACHUSETTS: Besten; The Amer pricultural Chemical Col. Bowker Fertiles, The National Fertilizer Co.

NEW JERSEY: Chrome; Armour Fertilizer Works, (address, Baltimore, Md.) Newark; Listers Agricultural Chemical Works. Tren-ton; Trenton Bone Fertilizer Co.

NEW YORK: New York; The Coe-Mortime Co., The American Agricultural Chemical Co Nassau Fertilizer Co., W. E. Whann Co., P tapsec Guano Co., The National Fertilizer Co Bowker Fertilizer Co., Frederick Ludlam Co.

NORTH CAROLINA: Greensbore; Armour Fertilizer Works. Charlotte; Swift & Co. Wash-ington; Pamlico Chemical Co.

OHIO: Cincinneti; Jarecki Chemical Co

OREGON: North Portland; Union Meet Co

PENNSYLVANIA Philadelphia; I. P. Thomas & Son Co., S. M. Hess & Bro., Inc., J. E. Tygeri Co. York; York Chemical Co.

SOUTH CAROLINA: Cherlesten; AmerAgricultural Chemical Co., Cos-Mortimes
Columbia; American Agricultural Chem
Co., Palmette Guane Corp., F. S. Roj
Guane Co.

TENNESSEE: Nashville; Federal Ch. Co., Tennessee Chemical Co.

VERMONT: Rutland; M. E. Wheeler Co.

VIRGINIÀ: Norfolk; Pocomoke Guano Co. Norfolk Fertilizer Co., Inc., Imperial Co. Hampton Guano Co., Berkeley Chemical Co. Robertson Fertilizer Co., Inc., Tidewate Guano Co., Carolina Union Fertilizer Co., F S. Royster Guano Co. Alexandria; Alexandri Fertilizer & Chemical Co.

For information as to application, write



The Garnett Company

AGRICULTURAL DEPARTMENT

New York, N. Y. Medina, O. Baltimore, Md. Atlanta, Ga.

A Huckleberry Orchard in Florida

By M. A. Sapp, Florida

OUR favor was received a few days since, requesting a letter from me giving a short history of my enterprise, and success (so far) in the cultivation of the swamp huckleberry (as they bear—I often pick from 10 to 50 quarts at one picking from one clump of quarts at one picking from one clump of bushes—and the berries each year now is the best income from my farm—which will steadily increase from year to year—as more bushes come into maturity.

I have never advertised this bushes in any way—the berries do it, as they are



Mr. Sapp in His Huckleberry Orchard

may be found in Alabama, and Mississippi and in cultivation to some extent, but I have never heard of it being cultivated—anywhere—until I concluded some 12 or14 years ago, to dig up a few bushes from the swamps near by, as an experiment, to cultivate around my premises, for home use—hoping to enlarge and improve the fruit in quantity and quality.

However I will first state that I came to Florida in 1890—bought and entered land some three or four miles north of Crestview which is now the county seat of Okaloosa, Florida—on the railroad running east and west between Jacksonville and Pensacola.

I cleared off some 40 acres—in time—and then sold off to different parties—about 80 acres—leaving me a fine farm of 120 acres—a portion of which I cultivate—up to the present time in a variety of crops—such as corn, oats, cotton, fruit and vegetables, also experimenting with the paper shell nut tree (the pecan). Have a fine lot of them which will soon come into bearing—and I have no doubt but that they will pay a fine income on the investment in a few years.

Great Increase by Cultivation

Great Increase by Cultivation

Great Increase by Cultivation
In the cultivation of the swamp huckleberry I soon found great improvement, bushes—rapid, hardy growers, with no enemies up to the present date to molest them in any way—fruit and bushes improved greatly each year by cultivation, and the increase of fruit, from year to year—seems almost incredible.

I soon commenced to supply my neighbors with berries, the demand has extended to the surrounding counties, towns, and cities and in the last few years have not been able to fill half of the orders that are received from the 1st of June to September—which is their fruiting season. I now have six acres planted in this berry—and about one-third of the bushes in full bearing.

Picks From June to September

I have from one to two pickings each week from June 1st to September 1st and can ship them hundreds of miles in bulk without injury. If shipped in quart boxes they will stand shipment to any city in the Union in good condition. I am still planting and growing bushes, and from one single bush, they soon commence to apread and throw up shoots—many of my clumps are five feet across, and from seven to ten feet high—full of fruit every year.

I cultivate as I would corn, between the rows, merely to keep down the weeds and grass, and about once each year I fertilize slightly with manure or commercial fertilizer.

seen in our nearby markets. I a having a demand for berry sprout my neighbors, and others from ad counties, fruit growers from No Florida are greatly intested in my ture—many of them are visitifarm and ordering sprouts this B. W. Stratton of Camp Walton is ing two hundred, Dr. Beal of Cam two hundred, both enthusiast growers, and claim that it will p great acquisition for Florida in the fruit.

growers, and claim that it will prove great acquisition for Florida in the way of fruit.

N. B.—As reference to the statement have made in this letter I can refer you the bankers of Crestview, or to B. W. Stratton of Camp Walton, Florida, who growing a fine orchard in that place. It has visited my farm in the fruit means as a starter that I sold him a few days and is now planting two hundred spous as a starter that I sold him a few days and it is not a huckleberry but reality is the high bush blueberry of Ne Hampshire that grows in the valleys as along small streams of that state. Have spent some years in that land he way familiar with the berries and fruits of the locality, and as soon as he visited worthard he recognized the bush and fruit at once. He claims it is today the mes popular and highly prized berry in its season that is grown in all New England.

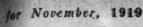
Mr. Davidson, of the Mount Hood, Ondistrict, reports that his cherry trees we practically worthless until pollinated by nameless seedling, not more than serveteet tall and bearing fruit of no valuations being pollinated by this seedling Mr. Davidson's four young Bing cherry trees produced this season \$160 worth of fruit.

Fallen leaves, grass, straw, etc., plowed under in the fall, will furnish to as much carbon, or valuable humusming material, as if left on the ground for months and plowed under in the spring

To keep bees safely over winter, insthe hives by packing them in a box some good insulating material succork ships, straw, shavings, sawdust. The packing must be tight, and in mate corresponding to that of Washin D. C., there should be four inches of ing under the hives, six inches on all and eight inches on top. Leaving opening to the hive but diminish the of it. A windbreak is desirable and covering box must be rainproof. He insulation is needed in colder climates.

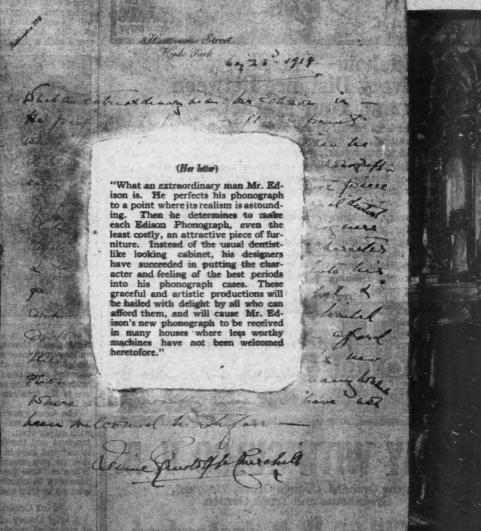
ida

year to year aturity.



A Letter from Lady Randolph C





THIS letter comes from the best furnished house in all England. Its writer is England's greatest authority on furniture. Praise from Lady Randolph Churchill is the Old World's stamp of approval on Mr. Edison's adaptations of Europe's richest furniture treasures.

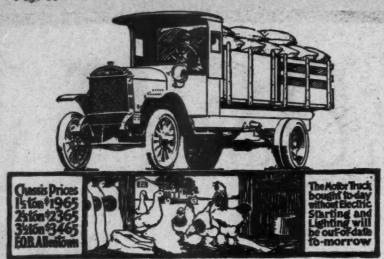
A reading of her letter, however, shows that Lady Churchill has been led by her furniture knowledge into a misconception. So artistically conceived, so exquisitely made are these Edison Period Cabinets that she has

drawn the very natural conclusion that they can be afforded by only the fortunate few. This is absolutely contrary to the fact. Mr. Edison has placed authentic period cabinets within the reach of everyone. He has required that a period cabinet be developed for each New Edison even the lowest-priced models.

These wonderful instruments in their beautiful cases are pictured and described in our new book, "Edison and Music." Write for it. Thomas A. Edison, Inc., Orange, N. J.

The NEW EDISON "The Phonograph with a Scall"





Bethlehem—The Shortest Delivery Distance Between You and Your Market

A Bethlehem Motor Truck on your farm would shorten your hauling day, cut your hauling and production costs and add to your yearly profits.

Bethlehem Dependability is a known quantity—thousands of Bethlehem owners have solved thousands of farm transportation problems with Bethlehem Dependable Delivery.

The husky, enduringly powerful, economical engine is built for the bad road and the over load. Electric Starting and Lighting means economy of operation and makes night work practical. The Internal Gear Drive delivers all the power where it belongs—at the rear wheels. The nearest Bethlehem Dealer has the answer to your hauling problem. Examine a Bethlehem.

INTERNAL GEAR DRIV MOTOR *TRUCKS DEPENDABLE DELIVERY ALLENTOWN, PA

In the Orchard, Orange Grove, Vineyard, Greenhouse and Truck Garden

Use SULCO V. B. Instead of

Nicotine Sulphate, Lime Sulphur, Bordeaux Mixture and Miscible Mineral Oils

Costs no more to use than limesulphur and the results are MUCH BETTER.

LCO-V. B

Has that CARBOLIC PUNCH that all sucking insects deadly fear. Gives off clean, refreshing, healthful odor in the orchard, etc.

Send for our booklet. It tells a complete story of Sulco V. B.

COOK & SWAN CO., Inc.

148 Front Street, New York, Dept. A Boston Office: 141 Milk St. Geo. H. Frazier, Mgr.

English Walnut Orchards

By R. G. Parker, Pennsylvania

By R. G. Parke

To MANY it may be a novel thought
that English walnuts can be successfully raised in the north. It has long
been known that California produces valuable crops of this kind and that Europe
sends to this country many million dollars'
worth of English walnuts and nut products.
It has now been actually proven that this
part of the country will produce better nuts
than can be produced anywhere else. You
all know that black walnut and butternut
once covered much of the north before the
land was cleared. English walnuts will do
finely wherever the other mentioned nuts
could be grown or did grow.

It is well to know from whom you get
your stock that the trees are from actually
acclimated parent trees, or otherwise there
will be trouble on freezing back and slow
growth. An orchard will give valuable
crops with a minimum amount of labor.

of the home where he roomed. He saw the the ground was covered with nuts, at was late in September, and they we of superior taste and size to any he we encountered. The large waxy leaves of a dark green color contrasted noticeably with the white bark and bole of the tree.

As they had a large crop he took sme home with him and intended planing them but the children ate all but seen. These he planted around his home. They all grew into thrifty trees and in the began bearing. Their fame soon spread and Mr. Pomeroy planted some so as to have trees to give his friends. Later on the planted an orchard and now other oreman are bearing all over the country; beside planted an orchard and now other oremakare bearing all over the country; beside the many trees that are planted around homes, parks, driveways, etc.

It was found unnecessary to bud or graft as they were thoroughly sturdy and



Nuts shuck themselves by shuck staying on tree until later and the nut falling and bleaching on the ground. San Jose scale does not affect the trees. State Inspectors account for this, on examination of the sap of the trees, as due to the soapy taste of the sap.

The trees grow about a foot the first year planted and may be transplanted with safety then. They will have a sound tap root and the first year should be fertilized and kept in about the same condition as you would keep a hill of corn. When the tree gets going good it is only necessary to mulch occasionally and then later on to trim and harvest.

acclimated. A professor from the D ment of Agriculture, Washington, I named them Hardy Pomeroy E walnuts.

bleaching on the ground. San Jose scale does not affect the trees. State Inspectors account for this, on examination of the sap of the trees, as due to the soapy taste of the sap.

The trees grow about a foot the first year planted and may be transplanted with safety then. They will have a sound tap root and the first year should be fertilized and kept in about the same condition as you would keep a hill of corn. When the tree gets going good it is only necessary to mulch occasionally and then later on to trim and harvest.

Nut Growing Experience

A brief history of the experiences of the most successful nut growers may give help to others. Mr. Pomery from Niagara County went to the Centennial Exposition in Philadelphia and while there he noted with considerable interest the large and beautiful shade tree in the yard

Plant Orchards This Fall

THE very big returns that commercial growers realized from their orchards last year, coupled with the even greater returns that appear to be certain this year, undoubtedly will lead many to consider seriously the advisability of setting an orchard. The writer of this article wishes neither to encourage nor discourage. consider seriously the advisability of setting an orchard. The writer of this article wishes neither to encourage nor discourage such planting. There is occasion, however, for calling attention to several facts that have been established by experience. The first of these is that fruit growing should be looked upon as a long time business enterprise. In addition to the original investment at the time of starting the orchard there is a six to eight year period during which the grower not only has to wait for returns but when he must add constantly to his original investment through care devoted to his trees. The fruit grower is fortunate indeed whose orchard at bearing age does not represent an outlay at least twice as great as that represented by cost of land, nursery stock and planting right after it has been planted. In the second place orcharding is an exacting business. Not only year after year, but month after

month, the trees need attention in the of cultivation, spraying, borer and protection, etc. This care must be them continuously from the time of as as long as the orchard lasts, if porteurns are to be expected. Any portive grower who is unwilling to provide constant care is to be advised to state of the orchard business, for otherwise certain to have but little reward for his way efforts. Illadvised planting is sive and an injury to the industry.

Those who are to plant orchards do well to make all arrangements to in the fall rather than in the spring means that the land should be thore prepared and the nursery stock orde that planting can start in late Oc. Fall-set trees do much better under souri conditions than trees planted spring. There is a smaller amount of trees and the growth of the fineseasons is larger and more vigorous, thermore it is generally easier to good grade nursery stock of the varieties than in the spring when are more or less depleted.

ned. He sawth with nuts, as and they we to any he way waxy leaves of

irds

DELCO-LIGHT

"Electricity for every Farm"

The Delco-Light engine is valve-in-the-head typeused in the best and most powerful airplane engines and in hundreds of thousands of automobiles.

It is air-cooled-runs on kerosene in any climatehas only one place to oil and has a simple mixing valve in place of carburetor.

The storage battery is exclusively designed and built for Delco-Light with thick plates, wood and rubber separators and many improvements that insure long life.

Delco-Light long ago passed the experimental stage and has gone through the refining influence of three and one-half years of production and of usage by 75,000 customers.

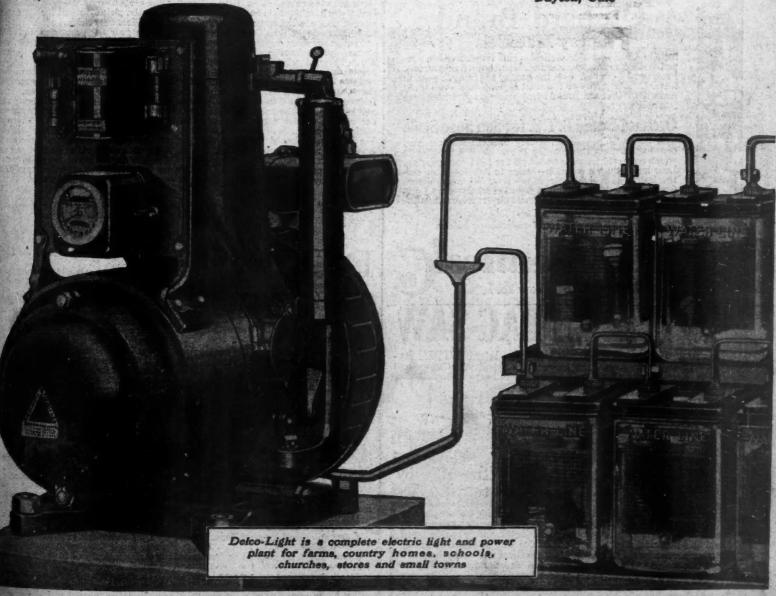
You will find plants in the homes of your community. Just ask your neighbor about his Delco-Light plant.

Delco-Light makes happy homes; it saves time and labor, taking away lots of hard, unpleasant tasks. It "Pays for Itself" by the work it does and the time

Of the more than 75,000 Satisfied Users of Delco-Light, the first are among the most enthusiasticproof that the simplicity and durability of Delco-Light meets the requirements of its customers.

There's a Delco-Light Man Near You

THE DOMESTIC ENGINEERING COMPANY Makers of Delco-Light Products Dayton, Ohio



The Farmerette

By John L. Shawver, Ohio

ABOUT a year ago I noticed in the AMERICAN FRUIT GROWER a card from a girl offering her services on a fruit farm. Inasmuch as we sometimes have trouble getting sufficient help in the orchard in October, we wrote to make inquiries as to terms and conditions expected. In course of time a reply came stating that she was already engaged for the summer but would be free for another contract the last of September. She arrived at the farm October 1st and we soon found she was

usually the most satisfactory to all except the poorest pickers. They vary so much in capacity for results that it is not satisfactory to pay by the day or the hour some will pick eighty bushels in a day while others pick but forty, and some will not pick over twenty. We prefer tall but rather slender persons for they do threak the branches nearly so much and so rule they are more active. We use strong but light ladders so far as possible. A few of the trees are so tall as to require ladden



Clara M. Bell, Farmerette, Working in Orchard, 1918

splendid help. Many men wait to be set to work each morning. Miss Bell did not hesitate to inquire what she should do. She learned to grade the fruit in a very short time and was very quick in all her work.

Though light in weight and small in stature she possessed much endurance and a hearty good will. She is intelligent, agreeable and delighted in waiting on the customers who came to the orchard. After the fruit was gathered and stored in the fruit was gathered and stored in the fruit was gathered and stored in the fruit house she aided in shucking the corn and hauling it to the cribs, in hauling fodder and in various other kinds of farm work, all of which she did well and quickly. We were well pleased with her work in every way and she expressed herself as well pleased with her experience with us.

We have paid pickers by the day, by the hour and by the bushel. The latter is

Tractor Dont's

By L. J. Gauthier, Califonia

ON'T throw the clutch in with a slam. Use judgment as it will wear longer and save much annoyance. It try to turn short on soft or plowed d. Either empty or pulling a load. It is or hammer near the magneto can avoid it.

In't run the engine above the speed do n number plate.

In't start a load with the engine rundowly and the spark advanced. Get off the start a load with the engine first burning near the tractor.

Don't try to solder a leaky gasoline in supply tank with a pound in the bearings.

Don't try to solder a leaky gasoline that in the start of the s Don't try to turn short on soft or plowed ground. Either empty or pulling a load.

Don't jar or hammer near the magneto if you can avoid it.

Don't run the engine above the speed marked on number plate.

Don't start a load with the engine running slowly and the spark advanced. Get up motion first.

Don't allow the gap between the rocker arm and valve stem to become more than 1-16 inch.

arm and valve stem to become more than 1-16 inch.

Don't make a practice of running your throttle and spark lever back and forth violently.

Don't expect your motor to shoot on all four cylinders if you don't keep your spark plugs in good order.

Don't take it for granted that ignition trouble is always the cause for your engine stopping. Remember it has to have fuel.

Don't tolerate any loose wires or poorly made connections. 'Fix them at once.

Don't tolerate loose bolts. Keep your tractor in trim at all times.

Don't do everything that Tom, Dick or Harry suggests.

Don't forget oil strainer in bottom of crank case.

By

Test

automatically if log sags or pinches saw. Hook-up on saw when moving rig holds saw in safety position, and out of the way of brush or limbs. Most practical and easily handled. Get full description and WITTE prices before you decide on any sawing outfit. Sent FREE.

crank case.

Don't forget that your motor is not an animal organism, repairing itself; it requires an occasional careful inspection.

Don't suppose, be certain.

Don't forget oiling instructions. Grease

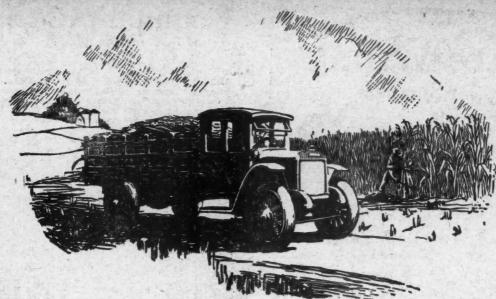


Easy To Use

Simple, Safe, Low Cost

VITTE ENGINE WORKS 214 R Onkland Ave., Ka

The WITTE is a modern high-grade outfit to chains or belts. Runs steady, ws fast. No stopping engine to ange cut or move rig. Engine is yele, water-cooled. Easy to adle. Saw stays idle until you and the clutch lever. Clutch works



You can't get away from the fact that 60,000 Republic Trucks have been bought by shrewd, sensible farmers and business men. Among them will be found a solid conviction that their trucks are not equalled - in performance, in ruggedness, in economy. In six years, this preference—based solely on the wonderful Republic record—has made this company the largest manufacturer of motor trucks in the world.

REPUBLIC

They Are Wrong **About Power Sprayers**

Men who don't know, say that no power sprayer's valves can be removed in two minutes with engine running and full pressure on the air chamber. But the famous Bean Pressure Regulator and threadless ball valves—exclusive Bean features—make this possible in the widely used Bean Sprayer.

They say that no power sprayer can be made without stuffing boxes. Yet the Bean Pump has none.

They say power sprayers must have brass cylinders and that the corrosive and excessive wear are unavoidable. The Bean, nevertheless, has porcelain-lined cylinders, and avoids both.

They say all power sprayers develop certain troubles that the operators must spend part of their working time in adjusting. Yet thousands of Bean Sprayers run from morning till night with full efficiency.

These are but a few of the things with regard to power sprayers about which some men are mistaken. They simply don't know the Bean's superiorities, and judge all sprayers by less efficient kinds.

We urge all these men to send for the "Bean Sprayer Book" and find out what the facts are.

Bean Sprayers have been in use for 35 years on some of the greatest fruit ranches in the world. You owe yourself a knowledge of it.

Send for this book. It costs you nothing to learn which is the best power sprayer ever made.



Bean Sprayers Invented by John Bean

No stops necessary. No wasting of operators' time.

Eccentric drive - larger bearings-

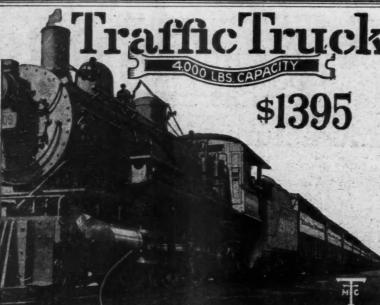
Plunger guide keeps cylinders and plungers in line.

Runs slower yet pumps greater volume, due to larger valves. Less liquid friction.

Large ball valves clo-quicker — no back slip-page of liquid.

Packing can be replaced in twenty min utes by inexperienced man. Several other vital features.

Mail Coupon



Traffic Specifications:
Red Seal Continental
19425 motor; Covert transmission and multiple disc clutch; Bosch magneto; 4-piece cast shell, cellular type radiator; drop forged front axle with Timken goller bearings; Russel and rear springs; 6

A Train-load

To meet the demand of Iowa farmers, this entire train-load of Traffic Trucks was shipped on September 15th to Hanson & Tyler Auto Co., of Des Moines, Iowa. It enabled them to keep pace with their promises for the immediate delivery of Traffics.

Traffic Motor Truck Corporation St. Louis, U. S. A.

Largest anclusive builders of 4,000-lb. capacity

Venture In Cherry Culture

By Mrs. Marie Hoyt, Michigan

OME years ago when peaches from south and west began to compete with the early and midseason varieties in the northern markets, cutting profits to the vanishing point, peach culture fell from its place of leadership in our orchards. The cherry then bid for the right of succession to the dethroned peach and was unanimously accepted on its superior accepted on its superior

new markets and making arrangement to reach them. Their experiment has we ceeded so well that their southern neighbors are planning this season to follotheir example.

I was just entering the field of horizol ture when the cherry first made its appearance or recognition. My beginning was mad and progress slow for a time, waiting on the



Mrs. Hoyt's Cherry Orchard in Bi

claims to merit. That is has made good is told by its increasing popularity. Every year more and more trees are set, at times taxing the nurseries to their limit to supply the demand. The older orchards are in full bearing now, many of them even showing venerable age.

Travelers up and down the state in the fruit belt report that, in their respective seasons, the lakeside counties are a bower of white bloom or a blaze of ripened fruit. Persons of conservative tendencies regard with misgiving this wholesale trend in a single line, and warn that the time will come when a cherry surfeited public will turn in protest as against a deluge. But how unlikely that one narrow strip of a state doing its utmost could flood a cherry-loving-world.

The present inadequate method of distribution works to the disadvantage of both producer and consumer. Local canneries and nearby large cities being the principal available markets, outlying districts where cherry culture is neglected must be deprived of this fruit or it must be procured by re-shipment from some market center. To promote a more accommodating system of distribution the Grand Traverse growers up north, have organized a co-operative bureau for searching out

accumulation of capital, yet every we marked an advance, meantime I wasleming valuable lessons. Although otherwing of fruit were set, cherries took the lest. Now, after so many years of pleasurable though strenuous effort, I have a beauty orchard of about a thousand trees. The routine of fertilizing, pruning, cultivating, spraying and harvesting has become a miliar to me.

The only serious for to the charming the market was the control of the charming the charming the control of the charming the charming

The only serious foe to the cherry that has developed here is the shothole fund, which spots the leaves, turns them yellow and precipitates them to the ground, leaving the branches naked and the fut to spoil. A system of timely and persistet spraying has been adopted which aw practically controls the disease. Sust cherries with their heavier foliage have thus far been immune from this fungut.

The varieties of cherries possessing controls are the statement of t

The varieties of cherries possessing or mercial value are few and cover the meseason. Enumerating from my orchard these are Dyehouse, Richne Montmorency, Morrillo, sour sorts, a Tartarian and Windsor, sweets. Mothers there are embodying points of cellence that win them a place in the faily plat, but the foregoing list compit the standbys for the trade.

Removing the Honey Crop

By J. H. Merrill, State Apiarist, Kansas

Honey is ordinarily produced either in the form known as comb honey or extracted honey, and the method followed in removing crop will depend upon which kind of honey is being produced.

The proper time to remove comb honey from the hive is when all of the cells are sealed over, or when the honey-flow is over for the season.

As comb honey depends largely upon its fine appearance, great care should be taken to prepare this honey for the market in as pleasing a manner as possible. First, the propolis and other foreign materials should be scraped from the sections, after which their appearance will be greatly improved if they are rubbed lightly with sandpaper. After the sections have been thoroughly cleaned, they should be graded and packed in the shipping cases for market. The sections may be graded according to the rules adopted by the National Beekeepers' Association, or by the Colorado rules. Whichever system of grading is used, care should be taken to make sure that all of the sections in one case are of one grade, and that that grade is the one under which they are to be sold.

Extracted honey may be removed from the hive when the cells in the extracting frame are two-thirds capped over, because

at this time the honey will be sufficiented to be removed from the his formerly was a custom to cut out the and squeeze it through a strainer of sort, the product being called "the honey." Now, however, since the tion of the honey extractor, the care cut from the cells by a sharp knill the frames are placed in the basket extractor and whirled rapidly, the being thrown out of the cells by this of centrifugal force. The capping have been removed from the cells may be to have adhered to them, or, they in cut off directly into a capping which is so arranged that the camelt and pass out at the front melter, together with the honey. The bination of melted honey and wax in in a container and allowed to remain to the top and the honey in various sized containers, from the sized glass far to as high as 60-pour the market to which he is contained to the melter to the top and the honey. The beekeeper will have to deal which size he will use, and this will upon the market to which he is contained.

lure

rrangement iment has southern nei

the cherry that to thole fungs, s them yellow the ground, and the fruit and persistent if which now see ase. Swat foliage have his fungs. m my ome, Richmond, ar sorts, and points of a ce in the fa

for November, 1919

Their Thanksgiving

Continued from page 12

the lighting plant he ordered a pump to furnish water under for various uses that he knew ave steps for his wife and increase

omfort.

In this plans included a modern bathwater at the kitchen sink and at faucets outside so that the lawn flowers could be sprinkled readily. Included, also, water under pressure the stock troughs at the barn. But he waited for the delivery of his tend pump, he had his building wired, is hung and the necessary concrete dition built to receive the electric. He weat carefully through the list circle accessories that he found could from his plant and which could in way save labor for his wife or make one comfortable. His selection was a to the electrical man, but a greater to him, for he was working and many with joyful anticipation against any she should come back to the farm to we more days were shortening and the or announced that she was to come on Thanksgiving day.

The Happy Wife

The Happy Wife s, his plans included a modern bath-

The Happy Wife

the surprised him, after all, for as me through the woodlot and started in hill toward the house, he suddenly her standing on the big side porch, ing for him as she had been wont to through all the happy years they had together.

incit together.
For a moment he stopped, amazed, unbirring. Then with a glad cry he was
the path and his eager arms swept her
imprily to his bosom.
It didn't take her long to explain that,
the doctor had found her well enough for
is journey back to the farm that morning
and that she had coaxed him into bringing
the himself out home since he was driving of, out home since he was driving

re her husband found her, she had

Before her husband found her, she had discovered all the splendid equipment he had provided and declared she felt fully qual to any household task, now that she had electrical servants to help her.

Well, the next day was Thanksgiving Day. All the children who had left the lome nest for nearby homes of their own, were back to the old farm on that day. The girls got the dinner and Mother was apposed to be resting, though she would lip around now and then to try the new vacuum sweeper or some other bit of dectrical apparatus.

And Father! As he watched the little woman, happy in her own home once more, he vowed that as a Thanksgiving Day it was a perfect one. And a mighty wave of peace and of thanksgiving rolled over him when, that evening, after the noisy guests were gone and he sat there in the twilight his wife came and, pridefully snapping on the new electric lights, tropped into her easy chair beside him and mid her hand into his own.

FRUIT RECIPES DESIRED

FRUIT RECIPES DESIRED

of American Fruit Grower:

response to your invitation to subens, in a recent issue, to offer sugens, in a recent issue, to offer sugens, for the improvement of your valpaper, I would like to suggest that
devote a portion of your paper to the
cation of suggestions and recipes from
others, for the uses of fruit as part of
daily food. I have no doubt that
any your many thousands of readers,
possess nome very choice recipes in
a fruit or vegetables is the chief inent, and an appeal through your
mans requesting readers to contribute
to would I feel sure meet with a
yresponse.

response.

ave read every article and every adment in your magazine and I contiavery fine publication, and wish very success. Yours faithfully,

G. A. NISBET,

Turua, Thames, Auckland, N. Z.

tor's Note—We think Mr. Nissugestion is excellent, and will ad to receive new or original fruit from our readers.

dram will be benefited by the use of dates instead of candy. They are taught to like these dried fruits.



15000 Yellow Transparent Apple Trees without a single blighted twig among them

THE ORCHARD, a part of which is shown in the above picture, consisting of 15,000 seven and eight-year-old Yellow Transparent Apple Trees in Nassau County, Delaware, was so badly cut to pieces in 1916 in an unsuccessful effort to control Blight that pulling out of the entire orchard was seriously considered.

At our suggestion "cutting out" of the Blight was discontinued and spraying with "SCALECIDE" was substituted as the remedy. Now, after three dormant sprayings, the trees are healthy and laden with fruit - without a single blighted twig among them.

"Cutting out" to control Blight and Canker is not necessary. "SCALECIDE" meets every requirement. It is a perfectly soluble oil (if not don't use it) and penetrates the diseased bark. Having both fungicidal and germicidal properties, it destroys the disease without the slightest injury to the delicate

Whether you have Blight or not, use "SCALECIDE" for your dormant spray. It makes a tree outgrow its troubles." One experiment station reported that pear trees sprayed for three years with "SCALE-CIDE" as a dormant spray produced 58% more fruit than the same variety alongside them sprayed with Lime-Sulphur, and showed extraordinary tree growth as a result of "SCALECIDE."

"SCALECIDE" is easy and pleasant to use—and costs less to apply. Write today for complete information and name of nearest dealer. Ask for copy of our guarantee. Address Dept. 11.

B. G. PRATT CO. 50 Church Street **NEW YORK CITY**

















Fairbanks-Morse "Z" Engines use Bosch High Tension Magneto Ignition. Largest Magneto order goes to Bosch.

Big pumping systems that irrigate thousands of acres— Small power pumps that give the farmrunning water—all serve better when a properly designed Bosch High Tension Magneto equipt Gas Engine supplies the power stream.

Fairbanks-Morse Engineers, after the most searching comparative tests, selected the Bosch High Tension Magneto for their famous "Z" engines. 'The price they paid for Bosch is more, but the dependable service "Z" engine users get puts price consideration last.

Any fuel in every size "Z" engine, from 11 to 20 Horse Power gives more power with Rip-Roaring, Bosch Sparks.

Bosch High Tension Magneto Ignition will also give you equally efficient results on your Automobile, Tractor or Truck.

BE SATISFIED

SPECIFY BOSCH

AMERICAN BOSCH MAGNETO CORPORATION Main Office and Works: Springfield, Mass. Branches: . . . New York, Cificago, Detroit, San Francisco More than 200 Service Stations in over 200 Cities



Sun Kissed Albemarle

Come to Albemarle County, Virginia, on the Eastern slope of the Blue Ridge Mountains, Piedmont Section. Good enough for Jefferson—Why not You? Home of the famous Winesap and Albemarle Pippin apples. Excellent schools, including the University of Virginia. Two trunk line Railroads.

You will like it in Albemarle.

WRITE FOR FREE BOOKLET

Chamber of Commerce

Charlottesville, Va.

Bee Keeping for Pr



Bees and Oranges

By Frank C. Pellett

We will be glad to answer any questions relating to Bees and Beekeeping. Address F. C. Pellett, American Gruit Grower, Chicago.

THE orange tree furnishes two liberal crops; first a generous flow of nectar, which if bees are present to harvest it may be stored up within the hive in the form of honey, and later a crop of fruit. It



Group of Beemen in a California Apiary

fas only been within recent years that the fruit growers generally have come to appreciate fully the importance of the presence of bees in large numbers in the orchards at blooming time." Many experiments have been conducted with various fruits to determine to what extent the pollination is dependant upon the honeybee. In most cases it has been shown that while under favorable conditions a fairly good pollination is effected by wild bees, the honey-



An Apiary in the Orange Belt of Califo

bee is the only agency which can be con-trolled to the extent of insuring their pres-ence in sufficient numbers to accomplish the desired result.

tinue favoral

ve question at the prop

hey be present 11 set of fruit is

ong past when convince the the value of ve question of

in the Same location throughout the the California orange groves, however, there is usually sufficient forage to port the bees a limited time only, list the orange secretes nectar very freely ing its period of bloom, it becomes necry to move the bees to other fields as as the blooming period is over, the common of the california and the man who keeps bees in one location throughout the is rather the exception than the rule, and the extensive beekeepers move as my as three or four carloads of bees to orange groves for the spring crop. This wing is very expensive but the returns for lavorable conditions are such as to be it profitable.

Strong Colonies in Spring

Strong Colonies in Spring

The great difficulty with the beekeeper to get his colonies sufficiently strong to one surplus so early in the season. Some semen take their bees to the orange in a sakened condition and build them up on a orange flow while harvesting little surge. Even this is a profitable arrangent for both fruit grower and beekeeper. The presence of the bees serves the purse of insuring pollination, while the bees alld up in fine shape for the next honeyw. However, when the great possibile of surplus honey from a good orange ware considered it falls far short of the seal. More and more are the better beechers wintering their colonies with a greserve supply of honey to enable the to start brood-rearing earlier in the son. By this means they are able to get a bees built up in advance of the flow on orange and thus harvest a good crop surplus honey from this source. It is ly the strong colonies of bees which store a big crops, and it helps the beekeep thittle if his colonies become strong after a flow of nectar has ceased.

The flow from orange is remarkable at nes. The nectar is secreted in such undance that horses and men at work in a orchards are drenched with it. According to California beekeepers with the writer has talked it lasts about ne weeks, sometimes slightly longer, takes 21 days from the time the egg is do for the worker honeybee to reach aturity, and several days more elapse fore she goes to the field to gather necre. It will thus be seen that the beekeeper ocomes to the orange flow with weak lonies cannot rear young bees in time to

tar. It will thus be seen that the beekeeper who comes to the orange flow with weak colonies cannot rear young bees in time to profit much from the nectar available. To quote George DeMuth of the U. S. Department of Agriculture, he rears his bees on the honeyflow, instead of for the honeyflow. For this reason but a small part of the possible honey from orange is ever hervested.

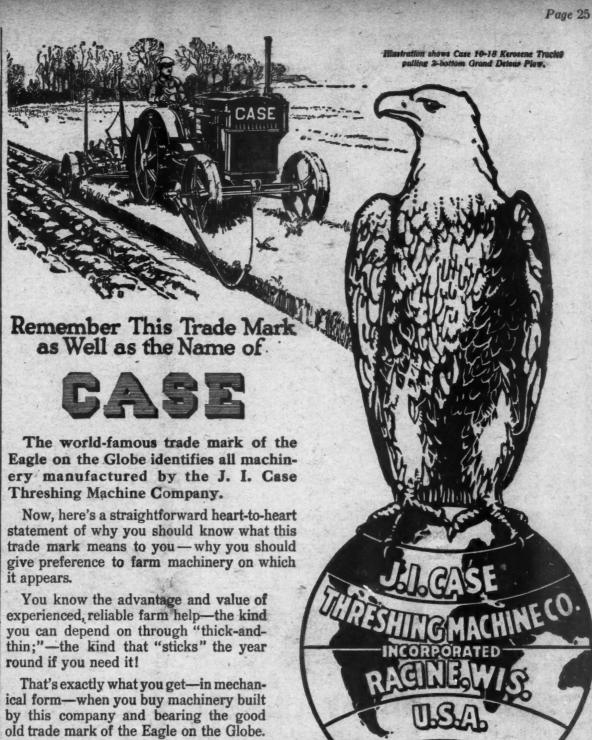
Some Honey Records

Some Honey Records

In 1918 a beekeeper near Portersville extracted 1/1 pounds of orange honey from one colony in ten days' time. In addition more than half as much more was extracted before the flow was ended. Four hundred colonies of bees in one yard averaged sixty pounds each of surplus from orange. A flow of nectar of this kind is sufficient to induce a beekeeper to move his bees a long distance. Some California beenen move three to five times in a year. One man moves from the almond belt to cange. From there he moves to the Sacramento or San Jacquin valleys where seeds he grown commercially and later agz in anoves the bees to the alfalfa fields. While he honey crop is never certain, there are my years that the beekeeper fails to get a softable return from one or more sources, there so many are available.

The interests of the beekeeper and fruit grover are mutual. Without the bees the scar becomes a waste product, doing not any good. Not only this but the collination of the fruit trees is never certain without their assistance. The prosperity of beekeeper and fruit grower are mutual their assistance. The prosperity of beekeeper and fruit grower are mutual to their assistance. The prosperity of beekeeper and fruit grower are intercest clash, there is a growing addency for each to appreciate his demands of the fruit trees in a full from the choice at either fruit growing or each to appreciate his demands of the fruit results. With hetter ethods at either fruit growing or the other and manifest a liminest to meet the other fellow half the most expert tention for best results. With hetter ethod comes greater prosperity to both.

n has a law to encourage the fruit and nut trees along the



This company has been building superior machines for farmers for 77 years—probably long before you were born! Often our machines have been a little higher in price than others; but you could bet your bottom dollar on their dependability in "a pinch;" on better work and more of it and over a long period of years.

> Look for the trade mark of the Eagle on the Globe on

Kerosene Tractors

Threshers

Steam Rollers **Rock Crushers**

Silo Fillers

Steam Tractors **Baling Presses**

Road Graders

We want the public to know to our plows are NOT the plows me by the J. I. Case Plow Works.

NOTICE:

9,000 dealers and 31 branch houses throughout the United States will take care of you in the matter of sales, service and supplies. Apply to any of them for detailed information, or direct to us.

J. I. CASE THRESHING MACHINE COMPANY, Inc.

Dept. Q, RACINE, WIS., U. S. A.

Making Superior Farm Machinery since 1842



From Log to Log One Man Saws 25 Cords a Day EASY, now, to cut down standing trees and saw logs into stove or cord wood lengths. This labor saver does the work of ten men. Easy to operate. Economical—uses little gasoline. Quickly moved from log to log and cut to cut without stopping engine. Thousands in use—every owner highly satisfied. Starts easy without cranking in any weather. Strongly built for hard, long dependable service.

<u>ITAWA OG SAW</u>

Does away with the old, back-breaking way of cutting wood. When not sawing, engine can be easily removed. Direct gear drive—no chains to bother with—no keys or set screw. Automatic friction clutch protects saw allowing slippage. 4-Cycle Hopper Cooled Engine. Oscillator Magneto. Unfailing power.

I save you needless profits and de-lay; ship same day order is received. Famous Ottawa Guarantee insures high quality and your satisfaction. 30 Days Trial. Pays for itself in a few weeks.

Direct From Factory

I save you needless profits and delay; ship same day order is received. Famous Ottawa Guarantee insures high quality and your satisfaction.

30 Days Trial. Pays for itself in a few weeks.

SEC. F. LONG.

GEO. E. LONG. OTTAWA MFG. CO. 1353 Wood Street,

Be sure to read the Advertisement on page 41. It is to your interest to do so.

Transmission Belts for Tractor Use

By Ralph W. Barnes, Ohio

At a recent Manufacturers' Tractor Demonstration, I heard the remark of a skeptical farmer in regard to the fact that

skeptical farmer in regard to the fact that tractors will never become adaptable for all power use on the farm. Another farmer asked the question, "Have you no doubt that the tractor will meet all the requirements of the farms?"

My answer to that would have been simply this, "Absolutely none. Farmers are tired of the old slow methods and want speed. Instead of wasting ten days to plowing they want three or less. They need more leisure and more time to attend to the business transactions of the farm to the business transactions of the farm and less time spent at the plow handles." And I know that this is really taking

place among the up to date farmers—they are paying more attention to the operation of their farms from a strictly technical

and business basis.

Haphazard business methods and slow irksome methods of producing food for the world's markets are rapidly vanishing and manufacturers are realizing for the first time that the farmer is a vital factor with a

time that the farmer is a vital factor with a keen interest in every progressive movement toward better business conditions.

The farmer today is faced with labor trouble and the advent of the tractor in the agricultural field is a means of solving this problem. It means a power plant on every farm bringing the possibility of a centralized power station.

This centralized farm power station will furnish light for the building, do the spring and fall plowing, saw lumber and operate every piece of power driven machinery which has heretofore been harnessed to any motive power available.

Centralized Power Station

It is therefore with the thought of the centralized farm power station that I wish to call the attention of the reader.

With any machine there must be a means of power transmission.

It is just as important that a farmer have the proper transmission belt as the industrial.

Heretofore belting manufacturers have

industrial.

Heretofore belting manufacturers have used the agricultural field as a dumping ground for inferior and low grade products which has militated against the sale of rubber belting for farm use.

These inferior grades of belting were made with the thought in mind that it had to be cheap in order to find a market in this field.

This erroneous idea has lead to the realization that the farmer is just as susceptable to good material as any one else and should be encouraged through the cooperation of tractor and belting manufacturers.

A complete analyzation of the conditions under which belts will have to operate should be made before any manufacturer attempts to build a belt which will economically and efficiently adapt itself to this particular work.

The following items are of interest to prospective buyers which I hope will enable them to select a belt qualified to perform the work of the centralized farm power station.

1. The belt should be adaptable to small

1. The belt should be adaptable to small or large pulleys running at speeds up to 3,000 feet per minute. This means flexibility and ability to conform readily to the shape of the pulleys.

2. The belt should be waterproof. To be of value in the farm field the belt should withstand dew and moisture which causes many belts to rot and shrink reducing its tensile strength to such an extent that it must be renewed.

3. Slipping not only burns the surface of

as Slipping not only burns the surface of the belt and results in having to renew it but causes a loss of power transmitted which is the greatest. Every ounce of power lost means a waste of money. This necessitates a belt of non-slipping qualities or friction surface which will grip the pulleys and overcome this evil.

A Belt should be of good tensile strength

leys and overcome this evil.

4. Belt should be of good tensile strength which constitutes the body or life of the belt. The cotton fabric should be an important feature to the belting buyer and he should insist that only the best is used.

5. Proper size and ply of belt should not be disregarded as it is just as important that these belts are of proper strength to carry the load as that they have all the other qualifications. This item alone is

THE BEST LINII

Gombault's

Gaustic Balsam IT HAS NO EQUAL

For trains, soothing and healing, and the for all Old Sorea.
The Bruises, or Wounds, Felons, Bolls, Woulds, Pelons, Woulds, Pelons, Human Burion Balsam bustic Balsam begual Body " Lini

who my contain a particle of polegnous aubetance and therefore no harm can result from its external use. Fersistent, thorough use will cure many old or chronic allments and it can be used on any case the requires an outwarn application with parfect salety.

Perfectly Safe eliable Re for Sore Throat Chest Cold Backache Neuralgia Sprains Strains Lumbago Sore Lungs Rheumatism and allStiffJoint

doctor's bills."

Price \$1,75 per bottle, Sold by deby us express prepaid. Write for Book
The LAWRENCE-WILLIAMS COMPAN



Let Eagle Lye **Guard Your** Home

Make your home a safe place to live in; make it free from disease-breeding germs. Buy a can of Eagle Lye from your grocer; it costs only fifteen cents and if you follow the simple directions on the can it will guard your home and keep it free fre germs. Try it.





Roll Why us

Grower IMENT

sam JAL ctly Sale

Throat st Cold ckache uralgia rains rains mbago Lungs matism ffJointe

ľ

ye

ER

ternote of successful belt operation if carried out economy and efficient les will result, firmly believe that if every farmer will yout these points before making a chase of belting whether for tractor, rator or any other farm machinery the trouble will more than pay him in moveledge he will receive. INDIANA APPLE SHOW

INDIANA APPLE SHOW
With each returning autumn the intertof Indiana fruit growers centers in the
mual apple show. The show this year
Ill be held at Tomlinson Hall, IndianapoNovember 4-7, and although the apple
op in the state is unsually light the indinions are for a creditable show. The
uit is almost entirely in the hands of the
mmercial growers and is of excellent
ulity. The earlier ripening varieties are
sing placed in storage which is furnished
by the Indiana Refrigerating Commy, but the bulk of the apples will be
ipped direct to the show or delivered
trucks.

another

FEDERAL

syrucks.
Several new classes have been added to show premium list. A one hundred tray swill be a new attraction with prizes hich will insure a lively competion. One the most interesting features of the low will be an exhibit by members of the low will be an exhibit by members of the low will be an exhibit by members of the low will be an exhibit by members of the low will be an exhibit by members of the low will be an exhibit by members of the low will be an exhibit by members of the long competition. This will also be true the Girls' Canning Clubs. The show is deprimarily for the education of the low properties of the low ming public the superiority of Indiaspples.

as apples.
This year a special effort will be made to terest the consumer in learning the varies which are best suited for different and methods of preparation. The spartment of Home Economics Extension of Purdue University will have charge this branch of the work and will give monstrations each day during the week.

rdue will also be represented by the artment of Horticultural Extension, acking and grading demonstrations, ing the approved methods of packing is, baskets and boxes and demoning the necessity for sizing and grad-

The Indiana Conservation Commission will have an exhibit of the resources of the state which in itself will be an interesting and valuable feature.

The Bureau of Markets Department of Inspection will illustrate the work of the bureau by samples of good and poor grading and diseased fruit secured from the open market and will illustrate the methods and advantages of the inspection work.

No literary program will be held in connection with the show this year but the parties in charge of the various demonstrations will give information in the various lines of horticultural work to all imquirers.

Numerous exhibits of horticultural sup-dies will be on exhibition by the manufac-urers and dealers in such supplies. The object of the show being purely ducational no admission fee will be

FRUIT WORK TAUGHT

By taking a special winter course in uit prowing at the state college at Ithaca, I.Y., the student will learn the nature and abits of the pests, disease and insect, hich cause serious losses in an orchard, as all as the best methods of controlling tem.

me. The best methods of controlling me. The will also learn about the nature and thods of handling orchard soils and the chemical nature of fertilizers, any materials and the like, which should of assistance to him both in the use of the materials and in their purchase. The short course student will learn but the important varieties of fruits, and in the various sections of the mitty, which will help him to know the course of the method of the fruit industry that competes has own and perhaps something of the bable future of the various sections will learn, further, the latest findings apperimenters and practical men consing the best orchard practices. The details about the winter courses comell may be obtained by writing the cary of the state college of agriculture than November 5 to February 13.



2-ton Federal owned by the J. S. Johnson Hawaiian Islands.

Here's a Busy Federal in

Federal-ized fruit haulage is not limited to the fruit belts of the United States alone; you will find growers and orchard men using Federal trucks in practically all parts of the world.

Far-Off Hawaii

Pictured above is the sturdy 2-ton Federal operated by the J. S. Johnson Co., pineapple growers, in the Hawaiian Islands.

Due to its greater power and rugged design, this Federal is admirably adapted for the rough and uncertain driving conditions of rural Hawaii. Its simple construction, too, enables the use of cheap native chauffeurs.

Write for our new booklet "Shorten the Miles to Market." It is written expressly for the fruit grower and farm business man who either uses or should use motor truck haulage.

FEDERAL MOTOR TRUCK COMPANY 32 FEDERAL STREET DETROIT, MICH

One to Five Ton Capacities

"Return Loads Will Cut Your Haulage Costs"







railmobile

Better Hauling For Fruit Growers

The Motorless Motor Truck

Thousands in Use

DIVISION No. 1 Light Four-wheeled Trailmobiles for use with passenger cars or light trucks, 1,250 lbs., %-ton and 1-ton.

DIVISION No. 2
Isavy - duty Fourrheeled Trailmobiles
or use with trucks;
½ toas, non-reversible,
2 toas; 3½ toas;
ad 5 toas, reversible
ad non-reversible.

DIVISION No. 8 S o m i - Trailmobiles: 3 tons: 3 tons: 5 tons: and 7 tons.

Write for booklet "Economy in Hauling"

The Trailmobile Company

507-537 E. Fifth Street Cincinnati, Obio

RUIT growers who use Trailmobiles can haul their crated crop to the railroad behind a light passenger carand do it as quickly as with a truck.

They haul loose fruit to distant markets and save expense for packing and commissions. They haul crates and material to the ranch. And they mount spraying machines on their Trailmobiles.

Drawn by either truck or passenger car the Trailmobile does all the fruit growers' hauling at lower costs than it has ever been done before.



STEEL MANTLE BURNERS ARE THE BEST

NO JOKE TO BE DEAF





Thousands of farmers and their helpers have found that with Atlas Farm Powder it is easy to clear land, make ditches, prepare beds for trees and increase soil fertility.

Send the coupon (or a postal mentioning this paper) and we will mail you the 120-page book "Better Farming with Atlas Powder," telling you just how to do the work.

ATLAS POWDER CO., Philadelphia

Atlas Farm Powder THE SAFEST EXPLOSIVE

The Original Farm Powder

Big Nut Contest

By W. C. Deming

Questions about nut growing will be gladly answered in these columns, or by a personal letter. Address Dr. W. C. Doming, American Fruit Grower, Chicago.

These articles frequent mention has been made of the desirability of finding and propagating the good native nuts of this country, and of the prize nut contests conducted for that purpose by the Northern Nut Growers' Association. It is probable that not one in a hundred of the really good nuts growing wild all over the United States has been brought to the attention of those competent to judge of their value. The announcements of these nut contests have reached the eyes of a comparatively small number of people, though a good deal of effort has been made and considerable money spent to give them publicity, and I wish in this article to bring to the attention of the wide circle of readers of the AMERICAN FRUIT GROWER, most of whom, I dare say, have favorite nut trees either of their own or growing in some other fellow's back pasture, the opportunity that these back pasture, the opportunity that these annual nut contests give them of rendering a service to the cause of nut growing, of winning substantial prizes and of giving their name to some nut that may become as famous as the Baldwin apple or the Bastlett nees.

Barlett pear.

For several years before the organization of the Northern Nut Growers' Association in 1910, and for a year or two thereafter, nut contests were conducted by Dr. Robert T. Morris of New York City at his own expense, first and second prizes were offered by him for thirteen different forms of nuts, and a number of valuable ones were found and have been propagated. Soon after the organization of the association, however, it took over the management of the expense of the propagated and prizes. ment of the annual nut contests, and prizes ment of the annual nut contests, and prizes were offered through voluntary subscription among the members, with the result that the improved forms of nuts now being propagated and planted are almost entirely due to these nut contests, originally instituted by Dr. Morris and continued by the association.

Special Prizes

One member has offered a prize of \$50 for a native American hazel that can comfor a native American hazel that can compete in the market with the imported filbert or hazel. This prize is still open. Another member offered a prize of \$25 for a shagbark hickory nut better than those now being propagated and it is probable that this prize has been won by a nut entered in the 1918 contest. Other special prizes of from \$10 to \$15 are offered for black walnut and northern pecans better than those now being propagated, a beech nut worthy of propagation and a blight resistant American chestnut.

Annual Prizes

Annual Prizes

In addition to these special prizes the Northern Nut Growers' Association offers each year prizes amounting altogether to \$120.00, divided into a first prize of \$5, second \$3, third \$2, and five others of \$1 each, total \$15, for the best specimens of each of the following listed nuts: black walnuts, hickory nuts, northern pecans, beech nuts, native hazel nuts, English walnuts and Japan walnuts, grown in the United States or Canada.

These prizes are always awarded, so far as the number of specimens of each nut sent in will permit, to the eight best nuts of each of these varieties, so that a sender of nuts has eight chances of getting some prizes for each kind of nut sent in.

Conditions of Contest

Conditions of Contest

The following are the conditions of the

Send at least twenty-five nuts from each tree that is to be entered and be sure to mark the tree so that no mistake can be made.

If more than one variety is sent mark

If more than one variety is sent mark each variety by name or number.
Send the nuts by mail carefully packed in a box or bag containing a slip with the name and address of the sender plainly written in ink.

It is well to send a letter separately describing the tree, its age, size, location, size of crop and if an annual bearer. But send the nuts anyway with name and address.

The contest closes December 31st each ear. Send nuts and correspondence to W. G.



Buy only dependable trees

"A poorly rooted tree may eventually make a satisfactory orchard tree, but it will be several years longer coming into bearing." U.S., Bureau of Plant Industry.

Neosho Nurseries Stock, grown in the Ozarks, has the quality of roots and trunks to produce quality fruits. Note: The fact that over 42% of our business last year came from old customers, indicates the growing satisfaction with Neosho trees and plants.

Get this valuable book

It tells you the varieties best suited to your climate; contains convenient tables of valuable informvenient tables of valuable information about ripening dates, etc. In short, it gives you just the information you need, including Neosho fair prices for quality trees sold direct from nursery to planter. Sent postpaid, free.

Send 10c and we will include our 80-pag illustrated book. Inside Facts of Profit able Fruit Growing—"A wonderful help to fruit growers."

Neosho Nurseries Co.,
Formerly Wm. P. Stark Nursery Co.
11 Bird Street, Noosho, Mc.





Free THIS NOVA-TONE

U. S. Co., Box 476-Gr





rower

ees

rs longer Bureau

tock, ne qual-roduce act that ast year , indi-on with

ook

et suit-ne con-nform-es, etc. the in-uding ty trees lanter.

80-page f Profit-ful help

ry Co. Ao. nd name

Root

ality ruits

n

2 Grand Ave., Baldwin, Nassau

receipts of all nuts will be acknowl-and a written opinion of their value by the secretary.

prize winners must furnish, if re-ed by the association, one lot of or cuttings for experimental propa-

You Can Sell Cuttings

wers of good nut trees will find op-mity to sell cuttings at the usual rate e cents a foot. luable nuts are named after the sender

aluable nuts are named after the sender the name goes on permanent record. he ideal nut tree is one that bears plenly nuts of large size with a shell that as easily so that the unbroken halves he kernel may be readily taken out. kernel should be plump, light colored of pleasing flavor. Ideal trees are, ever, seldom found and, in judging sent, the flavor of the kernel and the with which it may be extracted will insidered of more importance than the of the nut.

ial Prizes for Boy and Girl Scouts

pecial Prizes for Boy and Girl Scouts Dr. Morris has offered to duplicate, up the amount of five dollars, any nut is won by a boy or girl scout, or member a similar organization.

Perhaps there has been a reaction, since e close of the war, in the interest in see most important organizations. Here a chance for boys and girls to show that e scouts are still on deck and going rong, to add a little more fame to their sady high record, and to earn a little ady high record, and to earn a little

New Methods in Judging Nuts

New Methods in Judging Nuts
Great credit should be given to the prestecretary of the Northern Nut Grow'Association for devising new and exact
thods of judging the value of nuts.
retofore it has been a good deal a matter
opinion, or even of guesswork, but Secary Bixby has found means of deterning the points used in judging nuts,
the as size, cracking quality, proportion
kernel to shell, etc., so that they can be
oressed in figures, thus to a large extent
minating chance and guesswork. Too
the credit cannot be given for the great
count of thought, energy and labor that
escretary has put into this work.

Nature's Treasures

Nature's Treasures

The discoverers of the Baldwin apple and the Bartlett pear enriched our country millions of dollars a year. Nuts of year value await their discoverer. Think if the Schley pecan, once a wild native ree, now reproduced by the million and the nuts this year fetching \$1,400 a ton wholesale!

the fust this year retening \$1,400 a ton holesale!

The 1918 contest brought out one butter-ut, two black walnuts and one hickory, diged worthy of propagation. But there he better nuts than any of these known to me who will read these words. Send in our favorite nuts and perhaps have your ame handed down to a grateful posterity. Remember, a good nut should be one at furnishes a quantity of good food. In the should be full of sweet rich meat that make and easily.

Don't forget that this is an annual const whether you see notice of it or not. So the post of this notice where you can find it next ear and send the nuts then if you can't do this year.

t forget that there are sixty-four aggregating \$120, offered each year special prizes, aggregation \$120, to

of for, n't forget that any prize, up to five n, won by any boy or girl scout, will ubled.

go to it and may the AMERICAN GROWERS' army of readers bring be fruits of victory.

NEW TREBLA GOOSEBERRY
bert F. Etter, of Ettersburg, Cal., has agated a new hybrid gooseberry from wh that he found growing wild. A rid of the Champion. It is a very probarer with berries of high flavor by resembling the currant. Its great antages are its ability to thrive where climate is too warm and dry for the red ant, and its vigorous growth which ensit to stand much neglect. The jelly luced from its berries is said to equal finest currant jelly. The original bush, the began bearing at three years, is now set tall, 20 years old and so strong that tomises another 20 years of productive Cuttings are being propagated as div a possible.

Things Look For

WHEN you buy a tractor, use just as much care in making your selection as you would in buying a good horse. Don't take anyone's word for its being good - find out for yourself. Be sure that the tractor you buy has all the features essential to

all-around service, efficiency, and economy of operation. For instance, look for-

A kerosene engine so that you can use cheap fuel, thereby doing your power work at the lowest possible

A throttle governor to regulate the fuel to the load variations, insuring uniform speed and fuel economy and saving one man's time when engaged in belt work;

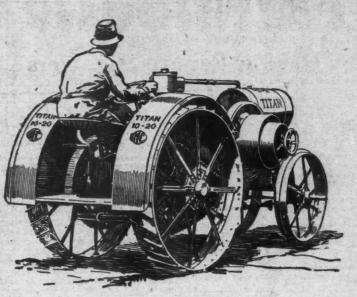
A drawbar with a wide range of adjustment both ways so that the tractor will pull any machine or implement on the farm with equal advantage;

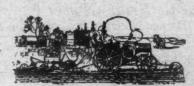
A friction clutch pulley with a wide face and broad diameter to insure full power-delivery to the driven ma-chine—a pulley so placed that the belt doesn't rub or drag;

Wide, full-length fenders over the drive wheels to protect the operator and engine from dirt and mud. Also a "safety first" feature;

A rear platform so that the operator can rest himself occasionally by standing up without losing time from his work.

You will find these and a number of other excellent features on the Titan 10-20 tractor.







Efficient Belt Power

If you need a larger tractor just bear in mind the International 15-30 — 50% more power than the 10-20 — and it's a kerosene burner. Write for pamphlet descriptive of the tractor best suited to your needs.

INTERNATIONAL HARVESTER COMPANY

CHICAGO

OF AMERICA INC.



(III)



PARKER'S HAIR BALSAM

Agents: \$40 a Week

aranteed One Year Must Wear 12 Mont

Plant Ray Peach Trees

> After several years' trial in both our test and commercial orchards, we unhesitatingly recommend the Ray as a moneymaking early peach. Plant it freely.

> > Karrisons Kurseries

have a fine stock of peach trees in Ray, Belle of Georgia and 20 other leading varieties. Also Apple, Pear and Cherry Trees and Small Fruits. All Harrison Trees are grown under our personal supervision and the budsticks are cut from our own fruiting orchards.

Harrisons' Evergreens grace the smallest lawn and the largest estate. Other Harrison Ornamentals include Norway Maples, Thunberg's Barberry and California Privet, Send today for 1920 Catalog.

"Largest Growers of fruit trees in the world"

HARRISONS' NURSERIES

Box 52

Berlin, Maryland

Kindly mention the American Fruit Grower when writing advertisers

419 EGGS FROM 20 **HENS IN 30 DAYS**

Mr. Dougherty Got This Result in October. Plan is Easily Tried.

October. Plan is Easily Tried.

"I tried Don Sung and the results were far past any expectations. I got 419 eggs in 30 days from 20 hens while moulting. I think this is wonderful, as they hardly laid at all before while moulting."

Frank Dougherty, 5940 E. 11th St., Indianapolis. Mr. Dougherty bought \$1 worth of Don Sung tablets in October and wrote the above letter in Nevember. Figure his profit on 35 dozen eggs from hens that formerly laid little or nothing.

This may sound too good to be true, but it costs nothing to find out. We'll make you the same offer we made him.

Give your hens Don Sung and watch results for one month. If you don't find it pays for itself and pays you a good profit besides, simply tell us and your money will be promptly refunded.

Don Sung (Chinese for egg-laying) works directly on the egg-laying organs, and is also a splendid tonic. It is easily given in the feed, improves the hen's health, makes her stronger and more active in any weather and starts her laying.

Try Don Sung for 30 days and if it doesn't get you the eggs, no matter how cold or wet the weather, your money will be refunded by return mail. Get Don Sung form your druggist or pealtry remedy dealer or send 50 cents for a package by mail prepaid. Burrel-Dugger Co., 448 Columbia Bldg., Indianapolis, Ind.

Classified Advertising in American Fruit Grower Brings Results

The people who lived in the

good days of the wise King

Canute thought he had the

power to make the ocean

recede at a mere word of com-

mand. Today the Bell Tele-

phone Company finds itself in

a position not unlike that of

the ancient king. Its mere word will not hold back an

Rigid economy and the most

modern methods of operation

have made it possible for the

Bell Company to keep its rates

at a far lower level than that

of the commodities which it must use in construction and

upkeep. But it has felt the

ocean of expense.





Feed Chickens Require

HAVE tried for some time to learn, if I might with some degree of truth, how much grain is required by a given number of laying hens and it is surprising to learn that no two poultry raisers agree as to the amount required in actual bulk. Possibly there are a large per cent of poultry keepers who know how much grain and how much mash is required to get best results, but I am convinced there is a wide difference of opinion on the subject. There are a lot of poultry keepers, I feel sure, who do not know with any degree of certainty how much to feed their chickens. Two things all poultry raisers agree on are that fowls require enough food or

rising tide of costs just as cer-

tainly as has every business

of the Bell Company is the

price you pay for service. If

this price fails to cover fair

wages and necessary materials,

then both you and your tele-

phone company must suffer.

pany was under Government control. The Government analyzed methods and costs;

and established the present

rates as just. All the Bell Com-

pany asks is a rate sufficient

to provide satisfactory service

to every subscriber.

For one year the Bell Com-

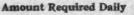
The one source of revenue

and every family.

nourishment to sustain and keep them in a healthy physical condition and a sufficient amount in addition to be converted into eggs. One thing is certain the majority of poultrymen feed sparingly of grain in the morning, so as to induce exercise, and a larger consumption of dry mash. I know one successful poultryman who feeds only three pints of scratch feed in deep litter to 100 hens for the morning feed. Mash is kept before them all the time, and at night a full feed of scratch grains is given, which amounts to about double that given in the morning.

Another seemingly successful breeder gives what he calls a spare ration in the mornings, namely two quarts of scratch to

mornings, namely two quarts of scratch to 100 head. No mash is given until noon and then there is a full feed at night. A full feed is meant all that the fowls will clean up before going to roost. Whatever this amount may be can only be determined by the action of the birds.



Insufficient feed will result, of course, in poor egg production, as will also too much, because when fowls are fed too heavily they will store up fat and very quickly get out of laying condition. The thing to be determined is the exact amount of food

get out of laying condition. The thing to be determined is the exact amount of food required daily for the number of birds so that the fowls will be kept in a healthy, vigorous condition and be most productive.

A poultry instructor at one of the agricultural colleges has the following to say on this subject:

"Relative to the amount of grain that should be given to 100 hens, night and morning, I must say that there cannot be a definite rule established, as the amount will always vary with the breed, the conditions under which the birds are kept, the amount of exercise they get and the number of eggs they are laying. I find that best results are secured when hens are fed scantily in the morning, say approximately a pint of scratch to 30 hens, and then all they will eat at the afternoon feeding, which should be in time so they will clean it up before dark. This promotes exercise during the forenoon and yet gives the birds a chance to eat all they want before they go to roost and it has been found decidedly successful.

"I might say that the average amount a Leghern hen will consume on one year seems to be about 75 pounds of grain and mash. Figuring roughly this means about four ounces a day. This represents the

mash. Figuring roughly this means about four ounces a day. This represents the average which can never apply to individual cases."

vidual cases."

It seems that the best thing in the way of feeding for any poultry raiser to do is to feed on a rational basis and determine by experimenting how much or what sort of feeding suits best his or her own individual case. A pretty safe thing is to watch the appetites of your birds closely, bearing in mind however, that the hen's appetite must be kept keen through the day, so that they will be full of life, and when roosting time comes, that they have a full crop.

Raise More Poultry

Raise More Poultry

On the basis of today's poultry and egg
prices, poultry raising will pay a good interest on any kind of an investment. Even
if poultry feed does seem high, do not
jump at conclusions and say "poultry
doesn't pay." Take out your pencil and
figure. Buy a small flock of thoroughbreds and keep tab on your investment.
No meat can be grown more quickly than
chicken meat and never before has the
price of poultry and eggs been as high in
proportion to the price of other meats as
it is today. Furthermore, eggs are indispensable in the family dietary.

The best time to select the females for
next spring's breeding is after the culling
this fall. At this season of the year the

Yes-fifty a day. How? Red



"More Eggs' Tonic is a Gol. send," writes Mrs. Myrtle Ice, of Boaton, Ky. She adds "I was may getting 12 eggs a day and now get in Give your heas a few cents' worth of Ratio, "More Eggs" and you will be amazed and thighted with the results. A million dollar in guarantees if you're not absolutely estated from the "More Eggs" costs you nothing.

"More Eggs" will double this year's protects of eggs, so if you wish to try this great punker, write E. J. Reefer, poultry exper, was Reefer Bidg., Kansas City, Mo., for \$1.90 per age of "More Eggs" tonic.

Poultry Raisers Everywhere Tell Wonderful Results of "More Egg"

"More Than Doubled in Eggs I am very much pleased with your " More Reps. and have more than deathled up in their ages. L. D. NICHOLE, M.

Never Saw Anything Like the "More Eggs" Tak I gave the "More Eggs" tablets to my homes and a cocke they began laying and laid all winter. I see apthing like them in the world. MRS. ALBERT BH Fenn. E. R. Ove Dooks, Lackswass, S.

W. H.

75 Per Cent Laid Every Day The "More Eggs" I ordered from you last wiste per at very astisfactory Fully 75 per cent of my last very day.

H. C. RADER, Greenville, Ins.

A Great Transformation I want to thank you for your booklet. I never ladestransformation as I have seen in my heas sizes giving the "More Eggs." They are laying straight on ever by MRB. T. T. BANKS, Fayettevilla R.

Makes Hens Moult Fast I would not be without "More Rege" if it cost Side points. It has hurried the moult for me and all my has any large their full capacity. JOE MARTIN, West Point In.

"More Eggs" Paid the Paster I can't express in words how much I have hom!
"More Eggs." I have paid my debts, dottest the
mw dresses, and that is not all—I paid my passes
sold 42% doses eggs last week, set 4 doses, set and
1% doses left. MRS. LENA McBROON, Wooding

1200 Eggs from 29 Hens The "More Rega" Tonic did wonders for ma-when I got the tenic and was getting five or at Epril let I had over 1800 cgps. I never new the EDW, MEKKER, Pos

160 Hens—1500 Eggs
I have fed 3 bosse of "More Ress" to my hans they have broken the ear record. I have 160 When and in exactly 21 days I got 125 dozen age.
MRS. H. M. PATTON Was \$200 Worth of Eggs from 44 H

never used "More Eggs" Tonic until last Dece t used one \$1.00 package and have sold over \$20 ggs from feety-four hons. "More Eggs" Tonic A. G. THODE, Sterling, Kane, R. Ne. 2;

1368 Eggs After 1 Package

Send Coupon

Every day counts! Send the c pon today for a full-size packs of "More Eggs" tools. Order pow and start

AMERICAN TELEPHONE AND TELEGRAPH COMPANY AND ASSOCIATED COMPANIES

A Modern King Canute

One System Universal Service

Trapnesting

Grower

where Tell More Egg Eggs" Tonis, S LA, Mender, E we Eggs" Take
y house and is the
inter. I never as
ALBERT SHITH,
acknown, N. E.
cry Day
last winter pani
at of any has his
Greenville, Tun.

ation
I mover had make almos giving the the overy duckayetseville, ILC Fast

ow? Read

appesting is on the same parallel as ing how many beans you have in a ter you count them. It means to exactly what you have, and what en produces. There are several ways ing out good layers but the trapithe only positive method. thorough and persistent line of trapiwere resorted to, it would be possione season to sort out all the unble layers in the flock. Not only but at the same time establish of breeding females and males that enhance productiveness. It pays to of breeding females and males that it enhance productiveness. It pays to nest because of the fact that far more be realized from the sale of breeding bred from high record hens than bred from an individual without a mind. Definite data can also be obtained to each hen's laying qualities, appnesting is not followed by poultry as extensively as it should because trouble required to keep such a systematic to be into a factivity sected with poultry keeping that pays at than systematic trapnesting. More trymen, too, each season, I believe, installing trapnests and keeping rids.

A good trapnest to be of any account must be easy to set and release the hen, at one that will not fail to catch the m. A nest that needs repairing every w days is not serviceable, yet the nest ust not be of too heavy material. There a many small things you will soon diswer if trapnests are installed.

W. H. ALDERMAN IN MINNESOTA

W. H. ALDERMAN IN MINNESOTA
W. H. Alderman is the new chief of the
division of horticulture of the University of
Minnesota. He was born and reared on a
arm and was graduated from the course in
noticulture at Cornell, N. Y., in 1908.
Until 1911 he was the first assistant and
then associate horticulturist of the New
Tork Experiment Station at Geneva. He



ferman, New Chief of Division of Horti-

went to the West Virginia Experistation as professor of agriculture and
ear ago was made director of that
a. At the time of his election to the
sota faculty he was acting dean of
lepartment of agriculture of the
raity of West Virginia in the absence
an J. L. Coulter. West Virginia met
rms of Minnesota's offer to Professor
nan, but he preferred the opporso to be found in Minnesota and has
ntered upon his duties at University

stimated that \$50,000 will be spent r in Hood River, Oregon, for power machines. 90% of the fruit will be ally sized and graded.



Dependable Priming Plugs



Equip Your Engine So It Sure-Fires When Cold

HAMPION Dependable Priming Plugs sure-fire cold motors because, with the priming cup right in the plug, the gasoline trickles down the core of the plug and drips from the sparking point where the spark jumps and is the hottest.

They are imperative in cold weather for the hundreds of thousands of cars that do not have priming cups, and are infinitely better for those that do, because priming cups let the gas in too far from the spark plug. Every car can be easily equipped with these plugs in a few minutes.

Price \$1.50 each.

Champion Spark Plug Company, Toledo, Ohio

PLANS FOR POULTRY HOUSES.
ALL STYLES, 150 ILLUSTRATIONS, SEND 10 CENTS.
INLAND POULTRY JOURNAL, Bopt. 4, Indianapolia, Ind.

Why Hens Won't Lay When Eggs Are High Priced

They miss the green of a summer diet, they become lazy laggards, have not the vitality to molt quickly, or digest properly the usual convenient feed. They lack the ability to exercise, and cat and drink what you give them without relish. Laymore, the great Egg Tonic, persists in making layers out of winter laggards. It adds to their vitality, sharpens their appetite, and tones up the laying organs without force or injury. to their vitality, sharpens their appetite, and tones up the laying organs without force or injury. Two full packages is sufficient for 100 hens three months, and cost but \$1.00 (delivery charges and war tax paid.) Guaranteed to give results or money refunded. Write today to Mayer's Hatchery, 213 First Ave. N., Route 30, Minneapolis, Minn., for these two packages, and it is not necessary to send any money with the order. Simply say, "Fill pay when the packages arrive," and delivery charges will be paid.



World's Best Poultry Journal
You be the Judge!
4 MONTHS' TRIAL
5 SUBSCRIPTION
5

how to keep poultry with greates th year. Bost articles; expert advice illustrated. 1 yr., 60; 2 yre ,81.00 al Pub. Co., Dept. 117, Quincy, Ill

For Sick Chickens

reventive and constitue of colds, from Canker, swelled sad, son breach sheets por, limber neck, sour erro, chick-type: "Have used Germonous 17 yrs. for chickens and could set state of without it. "Goo. F. Vickerman, Rochtale, Y., says: "Have used Germonous 18 years; the best for yest croubles I ever found." Frank Shak, Chicasa, Ill., rites: Thave less that I pigeon and no chickens in the 3 yrs. have been using Germonous." C. O. Perini, Molina, Ill.: I server had a sick chick all last season. "Bernard Horn-law berner, "Ratph Wen. Eric, Fa., says: "Met a sense in the string." Ratph Wen. Eric, Fa., says: "Met a sense in the string." Good so for rabbles, black, array: Curred my panishes chick the string." Ratph Wen. Eric, Fa., says: "Met a sense in the string of the

American Fence

Full gauge wires; full weight; full length rolls. Superior quality galvanizing, proof against hardest weather conditions. AMERICAN STEEL AND WIRE CO.

Get More Eggs; Save Feed

Sky-high prices for eggs this winter will make big profits for those who know how and what grain mixtures to feed. Improper methods mean big loss. Prof. T. E. Quisenberry made a thousand hens in the American Egg-Laying Contest lay 200 to 304 eggs each in a year. Another big flock cleared for him \$6.15 per hen in nine months. His methods are explained in a new bulletin, "How to Get More Eggs and Save Feed." Get this free bulletin by writing Quisenburry today, addressing care American Poultry School, Dept. 482, Kansas City, Mo.

Kindly mention American Fruit Grower when writing to advertisers



"I blasted the holes for my young trees instead of digging em by hand. That's the reason that I am all through planting before you're fairly started. Now I shall have time to do a lot more work around my place while you are breaking your back over those spade-dug holes."

"Sure, -if you want to call it that. It's the 'Yellow Magic' that's packed inside of those little sticks marked

HERCULES DYNAMITE

*And I'll tell you something else, too. Trees that are planted in blasted holes grow better and bear sooner than the ones planted in the old fashioned way. The shock of the explosion loosens the earth all asound the hole so that, when the young tree begins to take hold, its roots have a chance to spread and grow."

"When I first started to use dynamite I didn't believe that it sould make such difference—but I've learned by experience. The trees that I planted last Spring look like two-year-olds today."

"Better send to the Hercules Powder Co. for a copy of their 68 page, illustrated book, 'Progressive Cultivation.' It will tell you how to make more money and save time and backache by using dynamite in your orchard."



HERCULES POWDER CO.

75 W. 10th St.

Wilmington

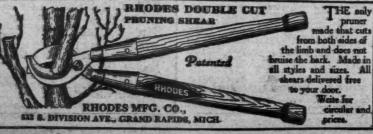
Delaware



Hercules Powder Company, 75 W. 10th St. Wilmington, Delaware.

Gentlemen: Please send me a copy of "Progressive Cultivation." I am interested in dynamite for ...





Coming Meetings

Alabama State Horticultural Society, mual meeting at Auburn, Ala., Nov. 12-13.

American Fruit and Vegetable Shippers' Assn., semi-annual meeting at Chicago, Hotel Sherman, January 14-16.

American Society for Horticultural Science, annual meeting at St. Louis, Mo., Dec. 29-31.

American Pomological Society, annual neeting at St. Louis, Mo., Dec. 30-31, Jan 1-American Society for Horticultural Scince, annual meeting at St. Louis, Mo., seek of Dec. 28th.

Arkansas State Horticultural Society. annual meeting, Lafayette, Ark., Dec.15-18. California County Horticultural Commissioners, annual meeting at Chico, California, Nov. 10-15.

California State Fruit Growers' and Farmers' Convention, annual meeting at Chico, California, Nov. 12-15.

Florida State Horticultural Society, annual meeting at Ocala, Fla., in April. (Dates later.)

Georgia State Horticultural Society, semi-annual meeting at Athens, Georgia, January. (Dates later.)

Illinois Horticultural Society, annual meeting at Bloomington, Ill., Dec. 16-18.

Indiana Apple Show, Tomlinson's Hall, Indianapolia, ind., Nov. 4-7.

Lowe State Horticultural Society and

Iowa State Horticultural Society, annual meeting at Des Moines, Ia., Dec. 9-12. Kansas State Beckeepers, annual meeting at Topeka, Kansas, Dec. 18-19.

Kansas State Horticultural Society, an-ual meeting at Topeka, Kansas, Dec.

Maine State Pomological Meeting, annaul meeting at Bangor, Me., Nov. 17-22. Michigan State Horticultural Society, annual meeting at Detroit, Michigan, Hotel Statler, Dec. 2-4.

Mid-West Horticultural Exposition at the coiseum, Des Moines, Iowa, Nov. 10-15.

Minnesota State Horticultural Society, nnual meeting at St. Paul, Minn., Dec. 2-5.

Missouri State Horticultural Society, annual meeting at Springfield, Missouri, December 9-11.

Montana Horticultural Society, annual meeting at Missoula, Mont., January. (Dates later.)

National Farmers' Exposition, Ter-inal Auditorium, Toledo, O., Dec. 4-12. National Grange, annual meeting at Grand Rapids, Mich., Nov. 12.

National League of Commission Mer-chants, at Cleveland, Ohio, Jan. 14-16.

National Tractor Show at Kansas City, Ma., Feb. 9-14.

New England Fruit Show, annual meeting at Elks' Auditorium, Providence, R. I., Nov. 10-13.

New Jersey State Horticultural Society, annual meeting at Altantic City, Dec. 1-3. New York State Horticultural Society, annual meeting at Rochester, N. Y., Jan. 14-16.

Ohio Apple Show at Columbus, Ohio, Dec. 11-18.

Ohio Apple Show, Terminal Auditorium, Toledo, O., Dec. 4-12.

Oklahoma Apple Show at Stillwater, Okla., Dec. 11-12.

Ontario Fruit Growers' Asso., annual meeting at Toronto, Nov. 12-14. Peninsula Horticultural Society, annual meeting at Chestertown, Md., Jan. 6-8.

Rhode Island Fruit Growers' Assn., annual meeting at Elka' Auditorium, Providence, R. I., Nov. 10-13.

South Dakota State Horticultural Society, annual meeting at Madison, South Dakota, Jan. 20-22.

Tennessee Horticultural Society, annual secting, Nashville, Tenn., Dec. 9-12.

Vermont State Horticultural Society, musal meeting at Rutland, Vt., Nov.

Virginia State Horticultural Society, annual meeting at Roanoke, Va., Dec. 2-24.
Western Fruit Jobbers' Assn., at San Francisco, California, Feb. 2-6.
Western Washington Horticultural Assn., annual meeting at Puyallup, Washington, Jan. 28-30.

Got 117 Eggs Instead of 3

Says One of Our Readers



One of our readers says, "More Eggs' increased my supply from the to 117 eggs." Any poultry raises easily double his profits by doubling the egg production of his hens. A scientificationic has been discovered that revital izes the flock and makes hens work the time. The tonic is called "More Eggs." Give your hens a few cant worth of "More Eggs" and you will be amazed and delighted with results.

Now is the time to give "More Eggs" to your hens, while prices as high and profits big. Don't let you hens loaf; make them lay. "More Eggs" Tonic has done this for 400,000 chicker raisers all over the country. It will do the same for you.

Million Dollar Bank Guarantees Result

Profit by the experience of a m who has made a fortune out of poultry.

A million dollar bank guarantes if you're not absolutely satisfied, you money will be returned on request and the "More Eggs" costs you nothing "More Eggs" will double this year production of eggs, so if you wish to this guaranteed profit-maker, write I. J. Reefer, poultry expert, 3658 Reefe Bldg., Kansas City, Mo., for \$1.00 package of "More Eggs" Tonic.

Poultry Raisers Everywhere Tell Wonderful Results of "More Egg

"More Eggs" a Godsend
ceived your "More Eggs" Tonic and found is
Godsend. I was only gotting 12 eggs a day, and
getting 50 per day.

MYRTLE IOE, Seein, is

um getting 50 per day. MYRTLE ICE. 8

"More Eggs." Paid the Pauls
I can't express in mords how much I have been
dore Eggs." I have paid my debts clothed it
wiresses, and that is not all—I paid my paste
d 42% down age last week, asl 4 down, set aldown lett. MHS. LEBA & McBROON, Weelth

1200 Fads from 20 Hens
The "More Eggs" Tonic did wonders for me. I had
an I got the tonic and was getting five or do sucil lat I had over 1200 eggs. I never as whe soul
EDW. MEKKER, Souths.

160 Hears 1500 Ears boxes of "More Reps" to my he can the egg record. I have 160 W 21 days I got 125 dozon eggs. MRS. H. M. PATTON. W

ASTRONOM PROPERTY		Section 1	-78
Name			****
	SAC STATE		
Address	Marian Service	-	
		NEW YORK	1000

Grower

of .

doubling the A scientife that revital hens work of called "More a few cant" d you will be the results.

give "More le prices as on't let your "More Egs" 0,000 chickes y. It will do

r Bank

Cesult

te of a man at of poultry, uarantees if tisfied, your request and you nothing, this years on wish to ty ker, write 1.

ker, write L 3658 Rede ., for \$1.00 Tonic.

where Td More Egg"

sound and it was age, as day, sai aw (OR, Bortes, ic. Pension ve been bendiedly that die difficult to yearter his dan 1, as e ome and to Woodbary, Sun.

ipon

Livestock and Dairy



HARD MILKING COWS

make milking cows

me are two causes of this trouble.

Inst and most common cause is an
mally tight sphincter muscle at the
of the teat. A less frequent cause
meture of the teat canal or a small
h in the canal. The first cause can
y be removed by a simple surgical
ion. There is also an operation for
make when the condition is due to a
me of or growth in the teat canal but
mits are not always so successful as
former case.

e former case.

competent veterinarian who will carecarry out the necessary antiseptic
autions should always be employed to
ome either operation as there is conable danger of infecting the udder
such precautions are taken. If the
ation is properly done there is little
ger of udder infection and the results
ractically always successful when due
tight sphincter muscle and many of
other cases may be greatly benefited
operation.

RATION FOR DAIRY CALVES

RATION FOR DAIRY CALVES
On farms selling whole milk, it may be tound advantageous to raise the calves for the dairy herd on calf meal instead of whole milk. The meal or gruel is added to the ration in increasing amounts beginning then the calf is two weeks old. A feeding pan which will work out fairly well with calves of average size is presented in Station Circular 88 of the University of Missouri College of Agriculture, Columbia, Mo.

The feeds used are whole milk, calf meal, man and hay. Calves receive whole milk until they are two weeks old. For the next week the quantity of milk is reduced and a pound of gruel added. In the fourth week the calves receive nine pounds of milk, three pounds of gruel, a little grain and ome coarse hay or alfalfa. From thirty days to six weeks the ration consists of six pounds each of milk and gruel together with a little grain and hay. The milk is then discontinued and the calves receive twelve pounds of gruel, a half pound of

grain and a small amount of alfalfa hay.
At two months of age the calves are getting fourteen pounds of gruel, one pound of grain and have free access to alfalfa hay. The gruel is discontinued after the fourth month, and the grain is gradually increased until by six months the calves are getting 4½ pounds of grain and all the alfalfa hay they will eat.

Gruel feeding may be continued after

Gruel feeding may be continued after the fourth month if desirable or it may be discontinued at three months of age and the calf be put on a hay and grain ration ac-cording to a plan which is described later in this circular.

Remember that calves will probably be less fat and smooth when fed on calf meals than when fed on milk. However, they should be of practically the same size and in a good thrifty condition. Milk is preferable as a feed and at equal costs should be given in preference to substitutes. The use of calf meal is valuable only when the selling price of milk makes the use of milk prohibitive.

All of the pretautions to be followed in

All of the precautions to be followed in feeding whole or skimmed milk must be observed when using calf meals.

Do not overfeed.
 Give feed in a clean wholesome condi-

Have all utensils scrupulously clean.
 Feed regularly and in small quanti-

ties.
5. Always feed at a temperature of 95 to 100 degrees F. Use a thermometer—do not use your finger.
6. Give the calf water to drink.
7. Be regular in everything.
8. Give the calves exercise in the open air during good weather, but do not expose them during cold, rainy weather.
9. Provide clean, well-lighted pens with plenty of bedding.
10. Whenever possible give each calf a separate pen and limit the feed of each animal. If a separate pen is not possible, stanchions must be used. Especially is this true when raising calves without skimmilk.

Kansas Orchard Tour

By F. H. Dillenback, Illinois

THE Kansas State Orchard Tour which started at Newton, Kansas, Sept. 1st, losed Sept. 5th, at Troy, Kansas. The attree tour was a success from every landpoint, the last day being a very fitting climat to a profitable week.

The idea back of the tour was to acting orchard men in the orchard distinct of the state with what the men in the er districts were doing. Quite a few the most progressive orchard men took rantage of this chance for a profitable ation by leaving their work and going see how the other fellow gets results.

the how the other fellow gets results.

Iday morning the tourists were met at byram Hotel in Atchison by a number oniphan County orchardists and the headed by F. H. Dillenback, county to Doniphan County, started for Wakeman's orchard southwest of hena. About 12 more cars joined here an hour was spent going through the and having Mr. Wakeman exhaus he cares for his orchard. Just leaving everyone when out and eat the fine pure bred sow and litter oring to Mr. Wakeman's son Norris a member of one of the Banker's Jubs.

The next stop was at Geo. T. Groh, Jr., at of Wathena. Here the orchards bearer and young were inspected and the stem of pruning and spraying explained y Mr. Groh. Then the packing shed and the vere visited, and then the sows and tens of Mr. Groh's two sons were shown. It is a some excellent pigs.

The tourists arrived at the Liberry Hall.

Annsas State Orchard Tour which de at Newton, Kansas, Sept. 1st, pt. 5th, at Troy, Kansas. The ur was a success from every the last day being a very fit in the action of the state with what the men in the bricts were doing. Quite a lew st progressive orchard men took of this chance for a profitable by leaving their work and going with the other fellow gets results. Morning the tourists were met at an Hotel in Atchison by a number and County orchardists and the ded by F. H. Dillenback, county Doniphan County, started for alternary and the fine pure bred sow and litter to Mr. Wakeman exheman's orchard southwest of About 12 more cars joined here bur was spent going through the many having Mr. Wakeman exheman's orchard. Just sting everyone when out at the fine pure bred sow and litter to Mr. Wakeman's son Norris member of one of the Banker's int stop was at Geo. T. Groh, Jr., thena. Here the orchards bearyoung were inspected and the pruning and spraying explained tob. Then the packing shed and visited, and then the sows and Mr. Groh's two sons were shown, as are also members of the Pig have some excellent pigs.

The state of the tour was the last stop was at the orchard in the tour for the afternoon. The first stop was at the urreful propriate addresses.

After the banquet and the prepared by the Ladies' Aid of Wathena, about 175 attended the banquet. After the adventise in was followed by Mr. Geo. W. Kinkead, of Troy, who told of some of the trials of the orchardists in the past. The toastmaster them intreduced Dean Farrell, Prof. Dickens, Prof. Call and Prof. E. G. Kelly of the Kansas State Agricultural College, who gave short appropriate addresses.

After the banquet 25 or more cars stated on the tour for the afternoon. The first stop was at the our for the addresses.

After the banquet 25 or more cars stated on the tour for the afternoon. The first stop was at the our for a profitable of the profit of the trials of the orchardists in the past. The toastmaster them intreduced Dean Farrell, Prof. Dickens, Prof. C

VICTROLA

The instrument specially made to play Victor and Victrola Records

"What artists make rec-ords for it?" That indicates the quality of a talking-machine as a musical instrument—upon that depends the pleasure you will get from it.

The Victrola brings to you the greatest artists of all the world—and they make records for the Victor Company exclusively because they are convinced that only Victor Records do full justice to their art;

that only the Victrola brings that art into your home in all its beauty.

Such fidelity of tone is possible only because Victor Records and the Victorla are scientifically coordinated and synchronized in the processes of manufacture. They should be used together to secure a perfect reproduction. That is the way for you to hear in your own home the superb interpretations of the greatest artists exactly as they themselves heard and approved their own work.

Victors and Vic-trolas \$12 to \$950. Write us for cata-logs and name of nearest Victor



Registered Tradem of the Victor Talk

VICTOR TALKING MACHINE CO., CAMDEN, N. J.

BE SURE TO READ THE ADVERTISEMENT ON PAGE 41 IT WILL BE TO YOUR INTEREST

"Saws 25 Cords In 64 Hours"



Any hustler can make big money with the WITTE. When not sawing you can operate other machinery. It's the one all-purpose out-fit for farmers and men who make sawing a business. Prices are favorable right now. As an illustration, you can get a 2 h. p. WITTE Stationary Engine on skids, complete catalog equipment, now, for 844.35 cash with order. All other size, 2 to 30 h. p., at low prices. Lifetime



New FREE Book!

Kirstin 2000 Stump Puller

Six Months to Pay prove these claims, ay will gitte you a in on THIRTY DAYS WRIES TRIAL grance. If pleased, keep puller. If not pl appeases. You don't risk a panny. Four of Kirstin pullers at low pripowell all since. Three-ye WRITE! Don't endure WRITE! Bon't endure Strong Puller Root ever publisher from Einstin neeps as



opy red bags, tidy d tins, handsome and and half pound humidors—and n numaors—and— ant classy, practical bund crystal glass umidor with sponge oistener top that teps the tobacco in ach perfect condition.

CRIMP CUT

OUT it right up to Prince Albert to produce for you more smoke happiness than you ever before collected! P. A.'s made to fit your smokeappetite like a glove. It has the best flavor and coolness and fragrance, ever!

Albert really is you want to find out the quickest way you know how! And, put it down how you could smoke P.A. for hours without tongue bite or parch. Our exclusive patented process cuts out bite and parch.

Realize what it would mean to get set with a joy'us jimmy pipe, or the papers and to fill 'er up every once and a while. And, puff to beat the cards! Without a comeback!

Just as sure as you're reading this, P. A. will hand you everything you ever yearned for in tobacco joy! Why, it's so good you feel like you'd just have to eat that fragrant smoke!

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

SPRAY-TIME IS BRIEF. Speed spells profit. Don't wear your fingers to the bone and your temper to a frazzle with a rattle-trap, out-of-date spraying rig. Don't gamble on insecure packing, slipping belts, clogged nozzles and leaky connections. SIMPLIFY and save time by using.



SPRAYERS

the trouble-free outlits perfected by a quarter-century of intensive study and ractical experiment.

Take your first step toward simplified spraying TODAY—send for the new Deming Catalog, 40 pages of spraying



A Valuable Talk On Small Fruit

S. J. Bole, American Fruit Grower, Chicago.

I HAD a vacation this summer, the first in two years. To say that I enjoyed being in the great out-of-doors for six long weeks is stating it very mildly indeed. We started near Kansas City and drove a car over those wonderfully productive Missouri hills toward the Mississippi. Crossing this great river we continued east and ferrying the Illinois, followed the Ocean to Ocean Highway as far as Springfield, Illinois, where we turned northward across Indiana and into Michigan. We drove to the end of the road and then drove into the woods. For thirty miles we slowly followed the two deep ruts in the sand that continually curved to miss the trees. Being a novice, I tried to keep the wheels in the ruts but had more or less difficulty. Finally, I decided to let the car go alone, and was agreeably surprised to see that it followed the road perfectly thus permitting me to get many glimpses of the wonderful pine country. I couldn't help but think if we would but let go of ourselves and let the Great Father run our lives, we should not only be able to travel more smoothly and keep in the road but would get many a glimpse of His wonderful world as we pass through.

Picking Wild Berries

Picking Wild Berries

Finally we came to a settlement and a good road again and a half-hour afterward arrived at one of the many beautiful lakes of north central Michigan—Houghton Lake. Here we made our permanent camp and lived through several happy days. We caught fish of many kinds and sizes—all we caught fish of many kinds and sizes and hved through several nappy days. We caught fish of many kinds and sizes—all we could eat and more. Then we took a side trip to a group of small lakes and a trout stream filled with the speckled beauties. For variety we picked wild blackberries—a long, slender kind that ripened in the partial shade of the woods and that possessed a quality and flavor hardly surpassed by any cultivated sort. There were blueberries, too, growing on bushes ten or twelve inches high. These grow in profusion in the clearing everywhere. Just how such wonderful fruit and vegetables can grow in the almost pure sand of the pine country puzzled me somewhat but did not prevent me from taking on an appetite not much different from what it used to be when I was a boy on the farm. The vacation has passed not to return but the memories of it are still with me. I am back at work again assigning lessons and helping college students over the difficult places.

Observations of Small Fruits

Observations of Small Fruits

Observations of Small Fruits

I saw small fruit plantations all along our route, they were few and far between in most regions and fairly large fields in a few localities. Many were badly kept but a few were in ideal condition. I saw the various small fruits on the markets, usually in small quantities and being eagerly sought after. I also noticed the prices of these on the market; strawberries at twenty-five to thirty cents, blackberries at twenty-five to thirty cents, black caps at the same price and blueberries twenty-five to thirty cents a pint. People seem anxious to get them at any price.

A decade ago, I made a small beginning in fruit-growing and as I look back, I can't help but feel that I have been very successful. The market seemed slow at times but I received nine, ten, eleven, and fifteen cents for them. During that time the prices have more than doubled and the demand is now far greater than the supply. Labor has advanced and box materials have greatly increased, but the possibilities in fruit growing are greater than ever before. Can you wonder that I came back more enthusiastic than ever before and that I have already resolved to add several acres to my plantation for another year?

A Decrease in Fruit Production

A Decrease in Fruit Production

THE DEMING COMPANY

930 Depot St. Salem, Ohio
Hand and Power Pumps in all Sizes

Kindly mention American Fruit Grower when writing to advertisers

A Decrease in Fruit Production

Growing fruit is a real man's job and yet there are few men at present interested enough to take it up as a business. Now and then a mother or a growing boy grows a patch to sell but few men are willing to grow ten acres or more and make this line of work their main business. During the decade ending with 1909 there was a decrease in yield of over eight per cent and



Cilberman and SONS

The House With a Million Friends"

Our 53 years of honest dealing with trap, pers—liberal grading and prompt returne-has won for us their Seal of Approval. You, too, can share in these extra fur profits—if you join the big family of setisfied Silber-man shippers.

man shippers.

Ship to us—get "The Check That Satisfies" in full immediately—without waiting or worrying. Over \$2,000,000 Capital behind every check. Good at any bank or general store in the country.

Write Us for Price List

and see for yourself why thousands of trappers ship only to us. You, too, can get a larger check immediately for your turk. Ship or get Price List Now—it will mean More Money in Your Pocket.

S. Silberman & Sons
THE LEADING HOUSE IN THE BEST MARKET
THE COMMENT WEST 35 th St. Chicago Ills.

rapping Pays Big





Gag

Grower

here say it's

man ons Million

Big

hearth is his greatest blessing but us give a proper value to health ar we have lost it. Many fruits high food value but no food is more two of health than a proper proportesh or preserved fruit from day to grow fruit, therefore, in a comway is as high a calling as any and pursuit and no calling in the more honorable in the world than sming.

A Dignified Calling

Profits in the Business

Profits in the Business

liked with several small growers this er and found that they were all very ful although it was a dry season in learts. A woman, well along in years, are or four city lots planted in fruit. The state of the season in least of the home had brought her two set of forty dollars. She had not season and and these plants but had kept them not and cultivated and so had not sem on account of the dry weather of ar previous. She sold them readily my-five cents a quart.

The showed me his small field of spherries, the best that I have ever a the middle west. The old canes had all removed as soon as the fruit soon one a picture beautiful for a fruit-grower k upon. From three-fourths of an I cuthberts the owner sold \$500.00 of fruit at the rather moderate price ty cents per quart. This plantation serived excellent care and was loom a rather light sandy loam soil, the end extending up the slope of a low m which sand and gravel were being and for highway purposes. As with small fruits, good drainage is the important single factor.

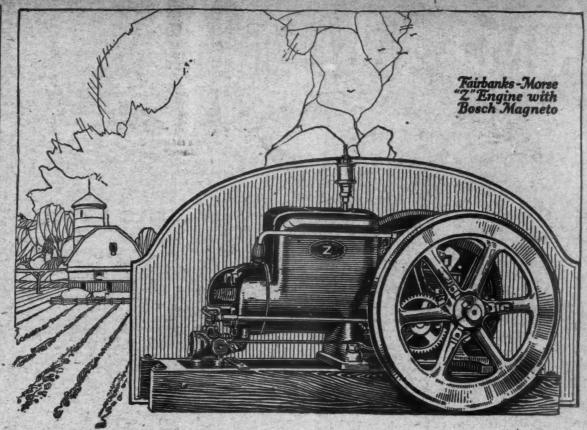
My soil, however, must be kept more ghly cultivated than clay. This of the mean that clay soils should be negliated that they too should he carefully sted and hoed. A man in Michigan I know every well has five rows of erries twenty rods long on the crest we shall. During the early sumewas working in an automobile factor of the besides supplying two famium these rows at twenty-five cents are.

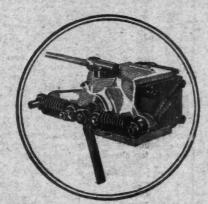
above illustration which might be din case of many others, are sufficient with the case of many others, are sufficient with the case of the profitable and satisfactory of all many profitable and satisfactory. Anome, the most dreaded disease of uits is not nearly so serious at prestives a few years ago. This like ther diseases seems to run in cycles period of seriousness seems to be any. This fact along with the contract by lime-sulphur as a dormant highly encouraging to the person at present thinking of growing bereit.

OME STRAWBERRY GROWER W. D. Gay, Iowa

w. D. Gay, Iowa

In the strawberry record of Elsa Alof Tennessee, in this issue of your
\$1,500 per acre. I have made a
this year that beats this considerI had a field of 18,300 square feet
hich I sold 249 24 quart crates. I
crates at \$5.00, 24 crates at \$6.00,
at \$7.00, the total amount of cash
dway four crates, besides we ate all
lid for 15 days, not less than five
were eaten. Above figures are acand can be easily verified. I am a
55 years old, and did all the work
ng the crop after 6 o'clock in sum1918. Local demand took them all,
appense for crates was small,
ham several times.





SINCE the "Z" was put on the market, over 250,000 farmer buyers have pronounced it the greatest farm engine value. TWe felt the same way about it. ¶ But following our policy to improve our product whenever possible, we are highly pleased to announce a new Fairbanks-Morse Z" with Bosch Magneto - high tension ignition which adds the one possible betterment. ¶ Call on the "Z" dealer near you—see this world's greatest engine - understand the full

meaning for you of the engine service which over 200 Bosch Service Stations give, in co-operation with every "Z" dealer, to every "Z" engine buyer. ¶ Prices—11/2 H. P. \$75.00—3 H. P. \$125.00—6 H. P. \$200.00—All F.O.B. Factory.





Spring field-Remington shet ville altered and refinished, model 1984 army cartridge. Wel at length 29 inches, U. S. Barrel 39% on breech action, blued finish U. S. ST

Pulverized Sheep Manure Adds Humus-IncreasesYield

Strawberries





Greatest underwear value in America at the price!

You can't get greater warmth or better workmanship or more comfort or more actual wear than every suit of Hanes winter weight underwear for Men and Boys surely will supply !

Hanes is made in winter weight Union Suits and Shirts and Drawers. lustrated here is the staunchest, most comfortable, wear-resisting union ait ever sold at the price.

Hanes Union Suits have the most desirable and dependable features—unbreakable seams; reinforced, non-attretching buttonholes that last the life of the garment; tailored collarette that cannot gap; shape holding elastic shoulders; elastic knit wrists and ankles; pearl buttons sewed on to stay. And, a closed crotch that stays closed!

Hanes Shirts and Drawers have the same desirable quality; perfect v manship and features. Drawers have the durable, anug-fitting 3-bit

Union Suits for Boys in quality, cosy warmth and workmanship are unsurpassed at the price! Reinforced at all buttonhole and strain points. In fact they duplicate Hanes Union Suits for men, with added fleedness. Made in sizes from 2 to 16 years. Two to four year sizes have the drop seat.

If your dealer cannot supply "Hanes" write us direct.

P. H. Hanes Knitting Co., Winston-Salem, N. C. New York Office, 366 Broadway Warning to the Trade-Any garment offered as Hane is a substitute unless it bears the "Hanes" label.



SOLD BY

l over the country, ale arages and Hardwai tores who handle auto

DEALER'S NOTICE order Peerless Automa-ille Specialties through rour jobber. If his sock has not arrived write us and we will see

PEERLESS AUTOMOBILE SPECIALTIES

MAKE OLD CARS LOOK LIKE NEW

They are made from highest quality raw materials. They add to the appearance of your car and the greater durability of these products, more than pays for any possible extra cost over ordinary paints and varnishes.

PEERLESS QUALITY PRODUCTS ARE:

Mohair Top Dressing Leather Top Dressing
Cushion Dressing Extra Fine Black Japan Cushion Dressing Lining Dye

Lining Dye

Jet Black Fender Japan

Mirroroid

Touch-Up Black

Kra Fine Black Ja

Ford Top Dressing

Liquid Wax

Auto Body Polish

Rim Paint Cylinder Enamel Tire Paint

Gasket Shellac Lamp Enamel

Also Eight Color Finishings in Following Colors: Red, Black, White, Yellow, Creen, Gray, Straw Color, Blue

It does not take an expert to apply Peerless Automobile Specialties. Anyone can do it by following simple directions on each can and first-class results are invariably obtained where Peerless Specialties are used. There is a Peerless Product for each part of your car that needs toning-up, body, wheels, fenders, and tops. And when refinished your car will have an appearance that anyone will be proud of.

MADE ONLY BY

THE COLUMBUS VARNISH COMPANY COLUMBUS, OHIO U. S. A.

Kindly mention the American Fruit Grower when writing advertisers

The Farm Engine

NQUESTIONABLY many farmers are overlooking a bet when they decide to get along without a farm engine, suitable for the work they have to

The diversified farming interests of the

The diversified farming interests of the country demand low-cost power, say nothing about the conservation of feed, roughage, fuel, and doing without expensive help on the farm.

Wherever the soil is tilled for gainful purposes the gasoline or kerosene engine should always be a part of the farming outfit, because one man with an engine is practically as good as several men without one. The hard jobs on a farm are made easy, time saved, food products made ready for feed that would be unsalable or a dead loss, all the work being done with a few cents' worth of gasoline or kerosene. Once this power is installed on the farm the cost of doing all farm work is less and when two or three jobs demand immediate attention it can be given without disastrous delay.

Every farming community in this country has its particular power requirements, out it is safe to say that the gasoline or kerosene engine, properly selected for the work to be done, will do it quicker, better and at less cost than by any other method.

Future Supply of Fuel

Eminent scientists agree that there is undoubtedly oil enough yet in the ground to last as long as the world needs it. New fields are being opened up, and the oil industry is making greater strides than probably any other industry at this time. So the future of the farm engine as a means of low cost power is practically assured for all time, and farmers will continue to reduce the expense of labor, turn out more products, have more to sell, increase their capacity, and what is more to the point, live better and have more of the comforts of life purchasable with the money saved and earned.

of lie purchasable with the money saved and earned.

This apples to the farmer in every locality and to every farm condition, as aside from preparing the soil and putting in creps no other implement has such a wide range of usefulness the year through. Every day the farm engine will earn its board and keep, does its work without pay, asks only decent eare and attention, consumes nothing unless it pays in power.

Used in Many Ways

The farmer having a gasoline engine of suitable size may, at low cost for fuel, provide daily, throughout the year, all the water necessary for stock, grind the feed for his animals so as to have a well-balanced ration, operate milking machines, break ice to cool the milk if he sells his product, or he may operate cream separator and churn if he makes butter for the market. When it comes time to nut in group the gas churn if he makes butter for the market. When it comes time to put in crops the gas engine will sharpen his plows and grind his discs, and it will grind his sickles for haying and harvesting. Later on when the silos need filling it will cut his ensilage, put it into the silo, or it will elevate his matured corn crop and put it in the crib, or it will shell the crop or crush it, cob and all, for feed.

If there is a timber lot on the farm an er fit there is a timber lot on the farm an en-gine will operate a saw rig, cutting up the dead and down timber, work up the win-ter's supply of wood, or cut wood for the market.

Conservation of rough feed and unsalable food products is a question easily solved by the gas engine. It is easy to chop up roughage, mix it with ground oats, corn, kaffir, feterita, or other grains. All stock relish a mixture. Even hogs will thrive on chopped or ground grain foods, and alfalfa, the size engine required depending on the amount of work to be done and the horsepower of the machine used.

Makes Irrigation Inexpensive

Makes Irrigation Inexpensive

In sections were water is necessary to growing crops and fields, the gasoline or kerosene engine pays for itself in a few weeks. The engine can be attached to a drilled well. The ordinary pump is easily utilized by providing a pump jack, and water from streams can be raised by the use of a centrifugal. These methods are in common use throughout the dry farming sections of the west and southwest, some ranches having as many as 10 engines of different sizes for their work. When grain is ready to cut, it is not unusual for the farmer to attach his small engine to the harvester.

Machines have been brought into use threshing and saving bean crops, pean crops and peas, the most useful and excops and peas, the most useful and expecial power being the gas engine. The engine may be and often is, mounted a special portable steel trucks and the from farm to farm to do the work, in from farm to farm to do the work, in the same manner saw-rigs are transported extension trucks carry the special chine instead of a saw and the opening charges for his services by the hour.

A Great Labor Saver

A Great Labor Saver

In cleaning grain for seed, or in minimulation for seed, a gas engine does the wind quicker, better and at less cost. The chard farmer operates his sprayer as with his cider mill with a gas engine, and to cotton farmer can gin his cotton if he the machinery and the necessary portion of the machinery and the cost of installing is considerable to know group and that it will be a seed to be a support of the gas and the cost of installing is considerable to some planters have found that it will be a support of the gas and the cost of installing is considerable to some planters have found that it will be a support of the gas end of the

Home Water Supply

nd in a

ide line
the pro
a the
very ti
greatly
weather

process
that the
let for the
Detail
Process
be furn
United
Washin

Home Water Supply

The question of water for farm a ponds and fish ponds is readily solve attaching an engine to the source of and letting gasoline or kerosene do work. Any farmer could have he fish pond if he cared to bother with fact, some make more money from acreage thus utilized than they could any other crop, besides having a large ply of excellent food always at hand.

Many farmers find it necessary or sirable to have concrete fence poug, crete feeding tables for hogs, considered to have concrete fence poug, crete feeding tables for hogs, considered with the farm concrete silos and hog wallows when mals may do their own disinfecting and lodge vermin. The farm concrete is of course operated by a gas or oil exthesize depending on the mixer.

For renewing the soil, limestone and crushed in rock mills, using the gas as for power; waste land be brought into dead trees and down timber remove made to pay a profit by cutting it either burning it at home or selling fuel. Otherwise worthless hedge for overgrown willows, caltalpa and farm trees planted primarily as breaks" are available as fuel whenever gas engine and saw are put to work.

Needed for Workshop

Needed for Workshop

Needed for Workshop

The farmer having a blackmit and power tools needs engine pot turning drills, sharpening mower grinding and sharpening hoes, hay and other farm tools. The corn moon the farm is not a luxury, but a mean to me may not only grind his owneal but have some for sale. In whered sections numbers of farmers profitable to spend their winter grinding corn meal and cutting and No matter what power the farme have for turning over his soil and pin a crop, the gas engine is absolute essary because it delivers its power cost. The gasoline or kerosene should be selected for the work its

ught into u ught into use a crops, per useful and tass engine. is, mounted tacks and taken the work, is re transport the special and the open the hour.

Saver tl, or in grade does the was cost. The prayer as well engine, and cotton if he ecessary por duty en is consider and that it wn crops.

make him, and community the gas commu

sections and in the new-mades it into pping. Grnish the rnish the new resses or bisa, hullers, their hines are op-ses stock fame, oreder find is irmals in cost-clipping. The erally used in p., especially a tage flocks po-tabor and the work mention fort, and the

the purpo ble size. rated by m title washes, root ca the farm ho one cutten r making p m jobs for

pply or farm dily solvource of a rosene d have his er with is oney from they could ang a large at hand ceasary of

New England Fruit Show

the New England Fruit Show, comd with the Rhode Island Fruit GrowAssociation, will be held in the Elks'
litorium, Providence, R. I., on Novem10 to 13, 1919. The show promises to
a remarkable success and has caused
interest beforehand. Entries are
srous and premiums large. \$1,273.00
be given in premiums besides a numof gratuities.

Rhode Island Fruit Growers' Asso-

gratuities.

Rhode Island Fruit Growers' Assoon, its object, as stated in its by-laws,
o promote and foster the fruit growing
sats of Rhode Island, to disseminate a
riedge of fruit growing and marketing,
said fruit growers to effect economies
uving supplies and marketing their
mets." Much success has met their

decta." Much success has met their ris.

he New England Fruit Show congrature itself upon the improvement in lity and the demand by the public for England grown fruit since the first of a fruit shows was held. The six New land states are learning to look upon melves as a unit rather than to emake any one state. A special feature he show this year will be the bringing he grower and buyer together, so that may profit thereby. The managent will take pains to introduce the two of the business to each other and are might for practical talks showing how grower can get more for his apples.

section will be devoted to commercial bits, and space may be secured in adea by applying to R. M. Bowen, But-

NCENTRATED CIDER WILL KEEP SWEET INDEFINITELY

west cider, rendered commercially sible the year around by concentrations up as a healthful ossis in arid desert of national prohibition, opens a profitable outlet for windfall les, says the specialists of the Bureau Chemistry, United States Department orienture.

Chemistry, United States Department Agriculture.

They have developed a process for constraing sweet cider which consists estably of freezing the fresh apple juice, rading the frozen product, and then by sans of a centrifugal process, separating the essential cider solids from the frozen ster, in much the same way that cream separated from milk. Five gallons of the can be reduced by this process to one allow of sirupy cider concentrate. This decenterate, being so much less in the concentrate, being so much less in the concentrate. When it is desired to use the concentrate it can be restored to original bulk, condition, and flavor mply by the addition of ordinary drink-twater.

imply by the addition of ordinary drinkactivater.

Concentrated cider will keep sweet
inch longer than in its original condition,
and in a cold storage it will keep sweet indefinitely. Its reduced bulk makes it,
resticable to keep it in cold storage. The
meentrated product thus promises to
make fresh cider available at soda founains throughout the summer months.

This product, to be profitable, should
be made on a fairly large scale, and predeably in connection with a commerfail ice plant located near an apple section.
Since the cider season is short it is doubtto the cider season is short it is doubtto the process would be profitable to erect
a ferigerating plant solely for the purpose
a freezing the cider. As a by-product or
the process would be reduced materially,
the cider-making season comes at the
very time when the demand for ice is
really dimmished by the approach of cold
mather. As the concentrated cider has
not yet been marketed on a commerical
cale, those proposing to undertake the
rocess should first satisfy themselves
that they have a ready and convenient outtifor their product.

Detailed information regarding the
rocess and the machinery necessary will
furnished upon application to the
lated States Department of Agriculture,
Vashington, D. C.

The distinction of being the quickest ach cutter in Sacramento County, Calinia, goes to a woman, Etta Corey, who traced \$15.00 per day with Tuscan clings several dollars more with the larger reties. She made a record of 82 boxes in the country of the country of



For Permanent Farm Construction

Atlas Cement is the ideal farm building material for durability and dependable uniformity of quality, setting time and strength. How to build any type of farm concrete construction is described and Farm." Use the coupon below to obtain your copy. Mail it to our nearest office.

For the Home

Most attractive and comfortable farm houses may be built of concrete blocks or stucco. One middle-west farmer in spare time made enough blocks for an entire new house. Concrete and stucco homes are permanent, fire-resistant and require no painting or repairs. ATLAS-WHITE Cement for the finish coat of stucco, may be applied pure white or mixed with color aggregates for any desired color scheme.



Housing the Chickens

Concrete chicken houses are simple and easy to build. They are easily kept clean and afford the best - known protection the best-known protection against rats, vermin and unfavorable weather in all seasons. With a few bags of ATLAS, sand, gravel, water and the help of your farm hande you can build your own. And, once built, neither you nor your fowls can outlive their permanence and freedom from repairs. dom from repairs.

"The Standard by which all other makes are measured"

The Atlas Portland Cement Company

NEW YORK Boston Philadelphia Savannah Dayton Minneapolis Des Moines St. Louis CHICAGO

The Atlas Portland Cement Company
(address the Atlas Office nearest you)
Please send me a copy of "Concrete On The Farm"
without cost or obligation.

B2

					FRE200	
Name	THE RESIDENCE	NOT A SECTION			MARKED AND	
					2012	DESCRIPTION OF THE PERSON OF T
Address	A STATE OF THE PARTY					
ASSESSMENT OF THE PARTY OF THE			Control of the Control	THE PERSON NAMED IN	THE RESERVE	SCHOOL SERVICE



Folding Sam	ing Machine Co., 3	61 West Harrise	n St., Chicago, M
	1	-	
	HONE	R-BILT	The same
TOTAL COMPANY	WER		S
	hand pump pails. Myer		
	er Power Pu		Some ?
wherever	you need it. I	xtra strong	
tion.	loderate in co	st, requires	
working a	Is self-oiling, learts, large value	res. liberal	rater- O
tric moto	erated by gaso r. Sizes for	every	relec-
need, 200 capacity. Ye	to 3000 gal, per on know it is better Myron. For the My	DOUT	216
Line of Pun Hay Tools	pe, Door Hangers is acknowledged		
es or write o	Booklet on room	ES A REO	Adhad Olfo
2 2	100		
	OP EVEN	PUPPE	





DON'T Build Without this Free Book

This handsome new book, "TOWN and COUNTRY BUILDINGS" contains many photographic reproductions of homes, large and small; garages, barns, and other town and farm structures, with floor plans of each.

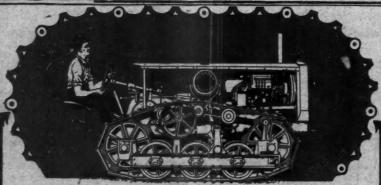
SELECT the house or other building that pleases you; take it to your home lumber dealer, and he will show you detail blue prints and working plans for it, with an accurate estimate of material required and its cost for erecting the structure complete. When you build, you are given the use of the working plans.

All this is Free to You

-no obligation of any kind. Just fill out the coupon below, or, if you do not use the coupon, mention this publication when writing.

ACT NOW-While your farm products will buy more durable, de-pendable Southern Pine lumber than ever before, and while you can get the material you need.





The MONARCH 16-9 is the logical tractor for the Fruit Grower. It has a long track which allows it to develop its fullest traction, a rating of 16 H. P. on the belt pulley, 9 H. P. on the drawbar; powerful enough to pull two plows under any condition or three plows when the soil conditions are favorable; turns in its own length and will work in the orchard close to the trees; it is completely spring mounted, easy to operate and does not tire the operator; it has a belt pulley of the proper size located on the side of the machine. There are three speeds, 1½, 2½ and 3½ M. P. H. with a governor which regulates the motor and speed at all times.

Write for literature on MONARCH Tractors. We will also be glad to send you our "Performance Booklet."

GENERAL TRACTORS. Inc.

209 Old Colony Building, CHICAGO



By Edith Lyle Ragsdale

DEAR FRUIT GROWER CHILDREN:

I hope you will all be able to go nutting this month, when the leaves get red and the hazel nuts are ripe. Get teacher to go along to take care of you and have a regular picnic. You and she, will be the better for it.

Tim and Pudgy, my two small dogs, both send you their best regards and say to tell you that they are not going to school this winter. But I tell them they are old enough, goodness knows, for Tim is 15 and Pudgy is 10, but I cannot seem to convince them. The canaries, Pete and Peggy, are singing about something, I can't just get it, for it is raining, and the gold fish are fussing to go swimming, so you see, between them all, I am having a hard time to get your story and Tangles out on time.

And haven't I given you a bunch of Tangles this time? Some of them were sent in by Elizabeth E. Schat, Cumberland, Va., and I hope she, and you, will send in more. Write me often and tell me if I am giving you what you want.

if I am giving you what you want.
With love,
EDITH LYLE RAGSDALE,

AMERICAN FRUIT GROWER, Chicago.

TANGLES

No. 15—What can run but cannot walk; as a tongue but cannot talk?

No. 16—Can you telephone from a moving train?

No. 17—Luke had it first, Paul had it last, Miss Sullivan had it twice in the same place but lost it when she married Murphy. What was it?

No. 18—What is it that uccurs once in a minute, twice in a moment but not once in a thousand years?

No. 19—Three Word Square:
A small animal.
A large animal.
Something to drink.

Answers to Last Month's Tangles

No. 13—Small change. Honey, Ink Jay. No. 14—Charade. Hollyhock (Holly—Hock.)

"PEANUTS"

(A Puppy Tale) (Book Rights Reserved.)

When the weather grew quite warm and the baby was old enough to sit alone, the Mistress used to spread a quilt out under the trees (away from the bee-hives) and there we'd all play, Buddy and Sis and the

the trees (away from the bee-hives) and there we'd all play, Buddy and Sis and the Baby and I.

By this time I had just about quit my naughty tricks. The last real bad thing that I can remember of doing was that of cutting down a row of grapevines. The Master had sent away off somewhere and got a dozen fine vines of a splendid variety. That was before I was born. By the time I was old enough to run around and exercise my sharp little teeth on whatever I could find the grapevines were up about three feet and all growing nicely.

I never can tell what possessed me to chew on them when there were lots of other things I could have been playing with. Anyway, I started at one end of the row and never stopped until I had chewed my way clear through that dozen vines. I certainly needed a good tanning—I realize it now, but the Mistress begged for me and so I came off scot-free when I really deserved a good trouncing.

But that was like the Mistress. She never can bear to see a thing hurt.

Another time, after I'd seen the men trim the trees in the orchard, I trimmed a

our several head managers to make in a steel in

favorite tree of the Master's. I gnaw every limb just as high up as I could I certainly did a most complete job too. But this time luck was with a couldn't reach only so high and that the four top limbs and I'll warran there ian't a better shaped tree o place than that one, though there good deal of a stir about it when the ter first found it out.

Well, with the passage of time I le

ter first found it out.

Well, with the passage of time, I lost puppy ways and became a very as dog. I think most of my reformation caused by the confidence of the Mist From the very first day that she gave Baby for my very own, I decided it high time that I quit my heedless way realized a great responsibility rested my shoulders, and I intended to per my duty if I died trying—and one in nearly did die in the performance of duty—but that's farther on in my tall Everything went along fine for as

Everything went along fine for Nothing bothered Baby and most duty lay in being on hand when a asleep or cried or wanted to be amused.

asleep or cried or wanted to be amused.

The only trouble I had was with the Master. It seemed that I just could's make him let her alone. Why, sometim, if I didn't watch, he'd pick her up! I have he had no business doing that, so I set of to teach him better manners.

I knew, and it looked to me like a should have known, that outside the littress, Buddy and Sis and I, ao one had wright to touch her!

One day I was lying beside her when the

right to touch her?

One day I was lying beside her what the Master, came in. I decided right that that was a good time to teach in lesson, so I raised right up and the go I let fly was enough to scare most any It did the Master for he backed of a tried to make friends. But none of it me. I raised my bristles and drew bading until my great, white strong terms. lips until my great, white, strong us showed.

showed.

At first the Master looked foolish, the laughed.

"Well, of all things!" he said, that:
"Say, Mamma, what do you think short this?"

The Mistress looked over at usmiled and I knew I'd behaved right
"I know Baby has a protector, said, "One that would die fighting for

At that I lowered my bristles; a Mistress had talked a bit to m gentle voice, I allowed the Maste Baby but, believe me, I kept m him all the time he held her!

One day Rags did the most awful I was busy watching Baby so is time to take my accustomed romp the little tramp and, I suppose, he be tired of his own company and the that he would seek amusement some place. I watched him out of the comp eye for a long time, thinking how ish little dogs could be. I believe I forgot that I had been just as foolial so very long ago.

For a time he remained in the chasing grasshoppers over the lawn; he hunted a mole and forgot how he was. But when he found the was not to be caught he turned his stion to the cat and teased her for as But after a time even that became monous. Then, as no one came to taplay with him, he decided he would town.

He knew the way well; he and the

town.

He knew the way well; he and the ter had taken the mile long walk times. So now, that he was on his he felt quite competent to do so his Being afraid of cars he kept to on away from the traveled strip. He quite brave as car after car appeared the bend of the road, honked, and specific to the continued.)

If 3

Start Your Vinegar Right

American Fruit o

Northrup, Michigan Experi-ment Station

Do not put your sweet cider into last r's vinegar barrel. If there is good nother" in the barrel, i. e., "mother" ich has produced a good flavored high divinegar, enlarge the bung hole, remove e "mother," wash it free from any setness and store it in a clean, covered crock a cool cellar until you are ready to use it. et, thoroughly clean out the barrel and the interest of the sweet it.

ord it. It is then ready for the sweet det.

Ordinarily there are plenty of the right inds of yeast present in the apple juice to cart off the alcoholic fermentation in a day or so but at any rate it is a good idea to ad a large number of the desirable years by moculating the juice with a pure culture carter and thus control the fermentation. The starter should be obtained a week at least before the apples are pressed. This is exactly the same idea which the modern housewife or baker uses in making bread. The yeast cake which is bought at the store a practically a pure culture of the bread or hear yeast and starts off the fermentation in a hurry, because it contains such enormous numbers of the right kind of yeast cale.

mous numbers of the right kind of yeast calls.

The modern vinegar maker adds to his most cider a yeast selected for its high alsoholic-producing powers (not the yeast used in bread making which produces only a small amount of alcohol) and when the alcoholic fermentation has stopped, adds either a pure culture of vinegar bacteria or the "mother" which he has saved as suggested above. These bacteria change the alcohol into acetic acid, the acid of vinegar his is absolutely necessary for this process, to the vinegar barrel must be provided with ood ventilation. To assist these bacteria, at the barrel on its side and fill it only so all as to expose the largest possible surface to the air, boring holes in each head to enourage a good circulation. You will also usit your germ friends if at all times you revent their enemies—other germs—from metring, by tacking a thin cloth over the various openings to keet out dirt, insects, ste.

Keep Up Temperature

One more very important way in which you can assist these yeast and bacteria miends is by keeping them at their optimum temperature, about 75 degrees Fahrenheit. The common mistake is not a keeping them too warm, but in keeping them too cool, especially in the late fall and winter months. You would not expect corn to grow and ripen in the Arctic zone; these germs are plants with similar temperature limitations.

If you will remember two this contractions as a second contraction of the contraction of th

rotector, hting for

t awful by so hed romp

these germs are plants with similar temperature limitations.

If you will remember two things, first, observe cleanliness in the preparation of your fruit for cider, and in storing it, and then keep it at all times at the optimum temperature with sufficient air, plenty of the right kinds of germs are practically always already present for making vinegar and your cider will need no inoculation.

If, however, for any reason you feel that the addition of pure cultures to your cider will be of aid these can be furnished by the Bacteriological Laboratory at twenty-five cents for each culture of yeast or of vinegar acteris. As before stated these should be ordered one to two weeks before they are, be used.

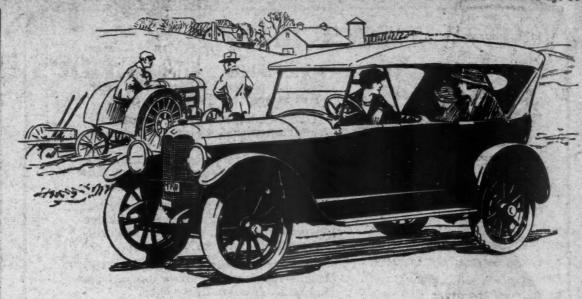
A bulletin is in the process of prepara-ton which will take up home vinegar mak-ag in detail. This will be mailed to all the have obtained vinegar cultures, and a others who may apply for it to the Di-ector of the Experiment Station, Lansing, lich.

HANDSOME NEW GRAPE

and south New GRAPE

a new grape, propagated by Francis
iny of Brawley, Cal., is of a beautiful
her color, growing in medium clusters
lose stems. The berries of a ten pound
pment sent to a Chicago dealer, averdone and a quarter inches in length and
ee quarters of an inch in diameter.
e longest herry was over an inch and a
flong. The grapes were borne on a twor old graft and matured at the same
son as the Thompson Seedless.

raspberries retailed at 50 cents a last summer. This may well enge the planting of this fruit which is



The Most Beautiful Car in America

Quality!

The price of every Paige car is established by the cost of high grade manufacturing materials and expert workmanship.

These two factors are the essentials in any fine product. To compromise on either one of them means to lower the standard of manufacturing—and that is precisely what this company never has done and never will do.

We do not make cheap cars for the simple reason that we have no faith in cheap materials or cheap workmanship.

As we have said repeatedly, we believe that Pride and Self Respect have an actual market value, so we build these qualities into every Paige that leaves our plant.

With such a policy there can be only one result. Our cars 30 into service with an honest heritage and a limitless capacity for hard, gruelling work

They endure because they are fit to endure.

They prove, day by day, that they are worthy of our complete confidence and every penny that has been invested in them.

PAIGE-DETROIT MOTOR CAR COMPANY,

McKINSTRY AVE., DETROIT



Sachment to car. Caunct Injure car or engine. Fution Clutch Pulleyen end of shaft. Ward Go or, run by fan helt, given perfect control. Money in net setleffed. Ask for circular and special, IARD MFC. CO., 2028 II St., Lincoln, i

Thousands of Dollars Saved Make neat dis-Easy to pack Economize space Easy to close No nails needed Easy to load Universal Bushel with the centerpost reinforcement Learn more about UNIVERSAL BUSHEL SHIPPING PACKAGES by writing for the interesting booklets "BIGGER PROFITS" and "SHIPPING PROFITS." PACKAGE SALES CORPORATION

Orchard Problems

Continued from page 8

of this land. It has advantage over clow as it lasts over a long period, of year Although alfalfa has not been used largely as some other crops, from what have seen of it, and know of its character of the commend it.

Protecting trees against mice and relating trees from field mice goes over the tree from field mice goes over the tree of the tree down to a depth of 2 or 3 inchesting trees and cleans out around the leaves for protection. He finds this giver of the tree down to a depth of 2 or 3 inchesting trees are used around trees, it serves a protection for mice and more damage done, than where cultivated. There are number of wire and wooden protector that can be used for rabbits. Also son growers find that concentrated lime in phur put on trunks of the trees will ten to keep rabbits away. Also white leasemetimes is used for this purpose, but should not be used on anything excepance or pear trees, never on stone fruitike peach. Elsewhere on this page I have given a formula for poisoning field mice.

Control of Brown Rot

Europ loubt.

mali S

untr

M

l fru notice covere from procee nd fr the an inspection, a

ion of

SAVI

Q.—My plum trees blossomed beautiful and as soon as the plums were about he grown, they began to decay on the tree Tell me what to do with them.—T. E. T. Mass.

Tell me what to do with them.—T. E. Mass.

A.—Probably brown rot, the most a ous disease that affects the plum. This be controlled by spraying with self-boi lime sulphur (8-8-50, 8 pounds quick lis 8 pounds flowers of sulphur, 50 galloms water) to which should be added to pounds of arsenate of lead. Prepare toording to instructions which will be given by an experiment station. First spright as shucks (calyces) fall from you fruit; second spray, two or three we later. The Domestica type of plu (European, such as Lombard, Yellow E Prines, etc.) rot worse than some of Lapanese plums or Jap Hybrids such Abundance, America, Red June, Gotton the Pride and Surprise are also rot sistant.

Leaf Spot in the Orchard

Leaf Spot in the Orchard

Leaf Spot in the Orchard

Q.—I am enclosing some leaves from mapple trees, can you tell me what is the mater with my trees?—H. C. H., Ill.

A.—Leaf spot. There are several kine, but the same treatment is beneficial them all. Use commercial lime sulping diluted, 2 gallons to 50 gallons of water for first spray which should be applied jubbefore cluster buds open. Second spray should be two or three weeks later, duted 1½ gallons to 50 gallons of water.

A Virginia reader's orchard was bady affected with leaf spot—frog eye. What his orchard was planted a filler was used and the orchard is now 17 years old. In he had never removed the fillers there was of course, an abundance of moisture under the trees that encourages this fungus disease. He overcame it by pruning heavily, spraying, and by turning under the caves as soon as they fell from the tree, thus doing away with the natural mulch that held the moisture, and covering up the leaves that were diseased.

To Washington County, North Carolina, belongs the honor of making the finst experiment along a line that promises to be richly rewarding to this county in the future. Each year a young man of soon ability and modest means will be selected to attend a four year course at the Stah Agricultural College. In exchange for this he must undertake to return to the county and farm after his four year course. In the way a logical leader will be graduated each year to develop the agricultural interest of the county. So excellent does this its appear that we would be very glad to set the states carry it out in the Horticultural Colleges. It would soon raise the states fruit growing where such training we given the young men.

Fred Onyon of California, has I new preserve of cantaloupes. I not that his process produces p and jams of unexcelled flavor ceping qualities. His object is

MAN to man, now, here's the most "Going to town? companionable bunch of tobacco I'm with you" that was ever rolled into a cigarette. Our own buyers in the Orient select for Chesterfields the finest aromatic - Ches. Field Turkish leaf. Our experts blend with

these costly tobaccos the best full-flavored Domestic—fine Blue Grass Burley and the famous "bright" Virginia. What's more, these tobaccos are put together in a way that brings out hidden flavors-flavors that other and less skillful methods have not discovered.

And it's a closely guarded secret, this blend—the manufacturer's own private formula. It cannot be copied.

Look up Chesterfields if you've got a summons out for "Satisfy."

You'll notice, too, how that moisture-proof package keeps your smokes firm and fresh, always.

Liggetterlyers Tobasso Con

20 for 20c

A man's best pal is his smoke

CIGARETTES They Satisfy

AGENTS: \$12 a Day



PARKER MPG. CO.

The BEST of e riding seaso is still to come if you travel on

BRAENDER

TIRES

ment basis, you'll find them
"THE TYRE TO TIE TO"
te for free booklet "Compliment Reading."

BRAENDER RUBBER & TIRE CO. Factory and General Offices Rutherford, N. J., U. S. A.



LIGHT YOUR HOME LIKE DAY-COST 1e SOLAR MANTLE LAMP



Only \$100 and After Trial

WAS \$100 - NOW \$57



Make \$100 to \$400 a Month

Learn in 6 to 8 Weeks



blems

Fifth Stage of

A Poisonous European Enemy

Whose destruction is boundless, has recently been discovered in our continent. Unless fruitmen and farmers prepare to combat this newest enemy, the loss to the agricultural field will range into the hundreds of millions of dollars annually, and the world will be deprived of much luscious fruit and farm crops.

Compares With a Vast Army

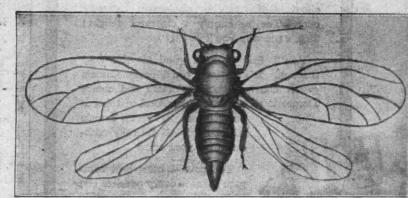
The damage done by this enemy is compared with that done by an army. Supposing an army of several hundred thousand men were to tramp through your grain fields, cut the trees down in your orchard, the loss to you would be almost intolerable.

Dangerous and Undesirable Immigrant

his terrible fruit infestation has in some way landed from ope, and fruit growers and farmers will soon, without a bubt, be combating this dreaded European disease. The covery of a severe infestation of the apple sucker (Phyllia all Schmidt), so well known and feared in many European

Man and Beast Covered With a Clear Sticky Liquid (Honey Dew)

A fruit grower and farmer, while cultivating his orchard, noticed that his clothing and the backs of his horses became overed with a clear sticky liquid (honey dew), which dripped om the trees. On further examination this appeared to occed from a small green insect with which the leaves, twigs



d fruit spurs were covered, which he took to be the green apple aphis (aphis pomo DeG). To remove this sticky liquid from e animals, a liberal supply of soap, water and a stiff brush was necessary. This fact he mentioned to one of the entomological spectors, who secured specimens for examination. Investigation revealed the fact that there were several cases in the same secn, and that wherever the insect was plentiful there was a copious amount of honey dew excreted by the insect. The determinan of the insect, Psyllia mali, was subsequently confirmed by F. Laing of the British Museum, from specimens forwarded.

Letter From a Progressive Subscriber

man has been successfully raising peaches and sail his life and his knowledge of the business is led by few. He is also progressive and runs no consary chances. That is why he is successful.

AVE \$1-SUBSCRIBE NOW!

to the zone postage bill and the tremendous buring the last year in the cost of paper, madlabor, the AMERICAN FRUIT GROWER than lower its standard in the slightest degree celled to raise its price from 500 a year to \$1. twe tried to hold off the increase, but the new swhich have come, and which have affected of us in different ways, have created new for this magazine.

the thought of our subscribers always in mind, decided to give them the opportunity to resubscriptions at the OLD RATE—a saving If you wish to renew your subscription, or subscription, save \$1.00 and

tail the Coupon and \$1.00 Now!

We Tell You How to Fight This Enemy

In the December issue of the AMERICAN FRUIT GROWER we will publish a complete article on the apple sucker (Psyllia mali), with several illustrations, showing the fifth stage of the Nymph Apple Sucker and also adult Female Apple Sucker. With our description and photograph of this deadly enemy you will be able to recognize same on sight. This article also tells what to use to kill this poisonous enemy.

HAS YOUR SUBSCRIPTION EXPIRED?

Owing to the high cost of paper and printing, we will not be able to run any extra copies of the December issue. If your subscription has expired, send your renewal in at once, because we will not send out the December issue to any expired subscriptions. Do you honestly think that you are doing justice to yourself and neighbors by not taking this precaution? Can you afford NOT to subscribe for the AMERICAN FRUIT GROWER? Don't you think it shows

better business judgment to spend Clip Coupon NOW this small subscription price than to lose your next year's crop?



THIS COUPON AND \$1.00 Will Save You \$1.00

Mail the Coupon Now!

H. R. MANKIN, Business Mer.

Dear Sir: Please enter my subscription for two years at the Special Half-price rate of 2 years for \$1.00. Be sure to enter my name so I will receive the December issue.

Classified Advertisements RATE. 15 CENTS PER WORD

POSITIONS AND HELP WANTED

WANTED—RELIABLE AGENTS, WHO WILL work and tell the truth. Established 1863. work and tell the truth. The French Nursery, Clyde, O.

GOVERNMENT WANTS RAILWAY MAIL clerks. Men-boys 18 up. Average \$117 month. Vacations. Schedules all Fall examinations free. Write immediately. Franklin Institute, Dept. L. 141, Rochester, N. Y.

WANTED — MARRIED MAN TO TAKE charge of forty-acre apple orchard in Washington. Must be experienced and furnish first-class references. Free rent of six-room house on property and good pay to right party. Address A. Z., AMERICAN FRUIT GROWER, Chicago.

RAILWAY TRAFFIC INSPECTORS: SPLENdid pay and expenses; travel if desired; unlimited advancement. No age limit. Three months home study. Situation arranged. Prepare for permanent position. Write for booklet C. M.-84, Standard Business Training Institute, Buffalo, N. Y.

FORDS START EASY IN COLD WEATHER—Will run 34 miles per gallon on cheapest gasoline or half kerosene, using our 1920 carburetors. Increased power; styles for all motors; can attach them yourself. Big profits to agents; money back garantee; 30 days' trial; Air Friction Carburetor Co., 294 Madison St., Dayton, Ohio.

cal, and scientific training, wants position. Formerly with the Pa. Department of Economic Zoology, and thoroughly familiar with tree nursery work. Especially qualified by practical experience in the principal fruit belts, and in his own orchards, to handle any fruit proposition. Box F, AMERICAN PRUIT GROWER.

REAL ESTATE FOR SALE OR RENT

OHIO FARMS—I HAVE OVER 400 FARMS any size and price U want. Free catalogue. H. H. Masters, Agent, Cambridge, Ohio.

ORCHARDS FOR SALE—TWO HUNDRED fifty acre farm, in Richland County, Illinois. One of the best apple orchards in southern Illinois. One hundred fifty acres bearing, forty just planted. A regular bearer; paying good dividends, has always received best of care. Good improvements. Price \$200.00 per acre. Pecan Grove in Florida, 40 acres paper-shell pecans, most of which is now bearing. Price \$600.00 per acre. Apple and Peach Orchard, near Vincennes, Indiana, thirty acres in peaches, 10 acres in apples. Nearly all bearing age. Price \$600.00 per acre. For sale by owners, H. M. Simpson & Sons, Vincennes, Ind.

ORCHARD EXPERT WITH BROAD PRACTI-

USER AGENTS WANTED-BELT POWER Unit makes any auto do work of 8 to 10 h. p. engine. Saw wood, grind grain, cut féed, fill silo, etc. Hundreds in use. Guaranteed no damage to car. Good commissions. Use it and sell your neighbors. Agents make \$150 to \$300 per month. Write for details. H. L. Downing, 310 Kasota Bldg., Minneapolis, Minn.

HONEY OF SUPERIOR QUALITY. ALSO Green County's famous brick cheese. Price list Green County's famous brick free. D. B. Rosa, Monroe, Wis.

PIKE'S TABLE HONEY—SHIPPED DIRECT.
Guaranteed our 15th year. Write for prices.
Pike's Bee Farm, R-2, St. Charles, Illinois.

ILLUSTRATED CATALOGUE, POSTPAID.

DO YOU WANT A FARM HOME IN A COUN DO YOU WANT A FARM HOME IN A COUNtry that has pleasant summers with cool, restful nights, mild winters, rich soil and where crops are assured? You will find these conditions in eastern Washington and northern Idaho. We have good schools and churches, good roads and agreeable neighbors. There are beautiful lakes and plenty of good fishing and hunting near by. A delightful country for your permanent home. Write for our free illustrated folder, "A Farm Home For You." Farm Development Bureau, 506 Chamber of Commerce Building, Spokane, Wash.

WASHINGTON "THE EVERGREEN STATE WASHINGTON "THE EVERGREEN STATE" has splendid openings for more farmers. Fruit growing, dairying and livestock raising, as well as grain growing show great results. Here is a mild climate, ample rainfall or irrigation and many valeys of fertile soil. Land prices range from \$25 an acre upward; depending on location and development. Good roads, schools and churches. Full information in new book by State Agricultural College and United States Railroad Administration, just off press. Ask for Washington book and give your name and address plainly. J. L. Edwards, Manager Agricultural Section, Room 679, United States Railroad Administration, Washington, D. C. FRUIT AND STOCK FARM—900 ACRE FARM

States Reilroad Administration, Washington, D. C. FRUIT AND STOCK FARM—900 ACRE FARM in famous peach belt of Alabama, 130 acres already bearing in Mayflower, Hiley-Bell, Georgia-Diology, Price: 1 lb. cana, 50:; 3 lb. cana, \$4.5; 10 lb. cana, \$4.5; 20 lb. cana, \$4.5; 20 lb. wooden pails, 10:50.

Write for free illustrated booklet on leaf-eating insects.

THE O. & W. THUM COMPANY

Manufacturers of Tuminfront Properties.

167 Straight Avenue, Grand Rapids, Mich.

(121)

Kindly mention American Fruit Grower when writing to advertisers

States Reilroad Administration, Washington, D. C.

FRUIT AND STOCK FARM—900 ACRE FARM in famous peach belt of Alabama, 130 acres already bearing in Mayflower, Hiley-Bell, Georgia-Bell and Elbertas; crop sold for \$35,000 last season, 700 acres cleared and stumped on which there is fine crop of cotton, corn and various food crops. All 900 acres of finest dark anndy loam, best all purpose land in the south. Peach crop from this section reaches market ten days ahead Georgia crop, and highest prices obtained. Fine land for straw-berries, melons, cotton, oranges, fies, cane, rice, cat, hogs, dairy and all kinds stock. Wonderful interactions of the country of the cou

NURSERY STOCK FOR SALE

COLES JAPAN CLOVER SEED \$8.00 BU will grow where other clovers fail. A sure or hay crop. Cole Seed Saver Co., Newben.

THE BUSHEL BASKET STRAWBEI the sensation of the fruit world. Attra lustrated plant circular free. A. B. Ka Macedon, N. Y.

MISCELLANEOUS

DUROC PIGS—\$30.00 PAIR. PEDI Sereno Weeks, DeGraff, Ohio.

MILK GOATS—WRITE GEO. WICKER 2916 East Central, Wichita, Kansas.

FOR SALE—FINE LARGE OHIO POTA \$1.40 bushel carloads. Wickham Beny Salem, Nebr.

SACRIFICE SALE—FORTY QUEEN I bators. Like new. Philip Condon, Ro Westchester, Ohio.

AMATUER PHOTOGRAPHERS ATTENTON Send your films to the Foster Studio, Ethan Ind. First roll and prints free,

"SON

on't y

your ins

o "dre

is one

Som

ng at ti re allov

ever a

ealth.

"Som

e wor hat pe school, reliance

re poss "Som trive fo

approact

mdru

etter t dwell pe

he dre

ven if loseate

s of

reater

o unsa main po youth

GOOD TYPEWRITER FOR SALE C Free trial. Easy payments if wanted Bertha Payne, Shawnee, Kansas.

WANTED—A. LARGE AMOUNT OF from cherry trees. Will pay good prices. Chemicals Company, Highland Park, Illinois

WANTED—TO EXCHANGE SELECTED OF ters, fresh from the beds, for apples, etc. as special prepaid prices and particulars. Wm. La. Cambridge, Md.

"NO TRESSPASSING" SIGNS—LARCE IE ible signs, on weatherproof board last for me 50c per doz, postpaid. Address, G. H. The Monessen, Pennsy

FOR YOUR SUNDAY READING. Silver Publishing Co., Dept. 13, Bessen Pittsburgh, Pa., for "Give God a Chang Conkey's vital little devotional booklet. solutely free, postpaid.

\$120.00 FOR BEST NUTS—BEER Black Walners, Butternuts, English Hazel Nuts, Hickory Nuts, Japan Nut Full information from Willard G. Bix Northern Nut Growers Asan., Baldwin, N N. Y.



Strawberry Plants, Peach Tre CHATTANOOGA NURSERI Chattanooga, Tonn.





NAMEL cigarettes win smokers from the start because the expertly blended choice Turkish and choice Domestic tobaccos make possible Camels' delightful mellow-mildness with that all-there "body."

Camels meet your fondest cigarette fancies in so many ways. Their flavor is unusual and refreshing; and they permit you to smoke as long as you will without any unpleasant cigaretty aftertaste or unpleasant cigaretty odor. They're simply a cigarette delight! That's the way you'll put it!

You'll find Camels good all the way through. It is a fact, you'll prefer Camels expert blend of choice Turkish and choice Domestic tobaccos to either kind of tobacco

smoked straight! And, Camels may be smoked liberally without tiring your taste,

To know Camels best compare them in every possible test with any cigarette in the world at any price!

> Camels are sold in scientifically easied packages of 20 cigarettes; or ten packages (200 cigarettes) in a glassine-paper-covered carton. We strongly recommend this section. If your dealer etrongly recommend this carton. If your dealer cannot supply you, send us \$1.80 and we will for ward you a carton direct

18 cents a package

Save Your Orchard

It takes years to grow a fine orchard. A colony of insects can destroy it in one one season.

Tree Tanglefoot will effectually protect fruit and shade trees from most of our destructive insect pests, i. e.:

Canker worms

Tuesock moths

Climbing cut worms

Canker worms Tuesock moths Brown-tall moths Woolly aphis

De

200

One application stays sticky three months and longer, outlasting ten to twenty times any other substance. Easily applied with wooden paddle. One pouad makes about ten lineal feet of band. It will not soften, run or melt, yet is always elastic, expanding with growth of tree. Effective rain or shine. Needs no mixing, used exactly as bought.

Endorsed by prominent Horticulturists. Endorsed by prominent Horticulturists.

For Tree Surgery



Gypsy moths

Grower

nts

FOR SALE

R.

WICKE

HIO POTA

QUEEN I

RS ATTE

SALE C

UNT OF od prices. Spark, Illinois.

SELECTED apples, etc., ilars. Wm.

ach In

SERIES

OF FUR

R. LYN)

MUSKR

MINK

arg Flor Onlei Enti

"Some Day"

COME day!" That fair, distant day when our dreams will come true! n't you love to dwell on it, even when in r inmost heart you know that you will ably never see it? Why waste time "dreams?" say some, but far from conning a bright dream as foolish, we think one of the best "treasures of the hum-

'Some day" we shall be rich; and on we with our business, which is so disheartenat times that we would lose all spirit did re allow ourselves to believe that we would wer advance further toward fame and

"Some day" that boy of ours will make world sit up and notice him; so we send at perfectly ordinary child regularly to hool, train him in self-discipline and selfliance, and give him the best advantages e possibly can.

"Some day" we shall be good; and we trive forward, rising after many falls, ever proaching a little nearer to the unattainble land of spiritual perfection.

What would we gain if we accepted our mdrum lot as unalterable? Isn't it better to build a Castle in the Air than to well perpetually in a hut? Let us not be raid of being derided as dreamers. If only the dream be worthy it will ennoble life ven if unrealized this side of eternity. ate dreams are classed among the fols of youth, but the folly of age is far ater and more tragic. Dull submission unsatisfactory conditions is one of the points of difference between optimistic th and pessimistic age. Those who with happy illusions grow old more why than others who say, "I've never steeded and I never will." Nor will they, ing as they hold that mental attitude. elves, we have dreamed many dreams for all their impossibility, some of them me true. "Some day" we'll make em all come true.

Home From School

HILDREN have been back in school for some weeks, and how quiet the seems! Perhaps the noisy little s fretted us in the hot summer days, ke the burden of the grasshopper menin the Bible, for in the Orient the g chirrup of grasshoppers is said to te the nerves. However, now that

long hours pass without the merry shout, the whistle and laughter, the often tuneless snatch of song, we miss them. The mother watches for the children's return. There are several ways to welcome them besides giving the cheery, loving greeting which is the birthright of every home-coming child.

Be thoughtful of the welfare of the little ones. Rain and cold are on the way. When your child comes home tired and chilled, do not wait until the regular meal time before giving some hot food or drink. A bad cold is often averted in this way. If the feet are wet, take the precaution to change the shoes and stockings. Wet feet were said to be a fruitful source of influenza last season. Physicians advise every one to build up as great a reserve of health and strength as possible in order to establish a more diseaseresistant condition.

Study-time follows supper as a rule, and in view of the irreparable damage done young eyes by studying in a poor light, great care should be taken to provide suitable lights for the student. Kerosene lamps must still be the reliance of many farm homes, but they can be made satisfactory if kept clean and bright. Nothing is more distressing to the eyes than the naked flame of a lamp, and a shade should be adjusted that will throw the light upon the book while keeping it out of the eyes. Individual green eye shades are not pretty, but they are very efficacious.

A New Canning Club Activity

IN TENNESSEE there is a girls' canning club that has made what is, so far as we know, a new departure, but we see no reason why others should not follow their profitable example. The girls induced the city commissioners to donate a stall in the city market for their use, and we judge that the young ladies must have shown both ability and tact, for we learn that they received willing co-operation from all connected with the market, from the stall-keepers to the market master.

At this booth the products canned by the girls are disposed of, as well as certain articles of home-made cookery. A stove has been installed and certain hot dishes prepared upon demand. On Saturdays so thriving a business has been done that two girls were needed to keep pace with the customers. It is of prime importance that everything offered for sale here be of firstrate quality, otherwise it would be hopeless

to try to build up a trade on this basis.

The girl in charge of the booth is paid by a certain percentage of the sales and finds the position rewarding. Each club will decide for itself certain points—such as the variety of goods to be sold, the price to be asked and the percentage of sales to be given to the member in charge. Various localities require various supplies to meet different requirements. Girls with initiative and business sense, will not be slow to find out what the public wants. The county agent can be of great assistance to girls in such a venture.

Not all city commissioners are amiable enough to donate a market stall for this purpose, but many of them would do so, and practically all would make some effort to accommodate the girls' club. Clubs that are working in the country at too great a distance from town to make regular attendance possible, might well interest one or two city friends to take charge of the booth. They should obligate themselves to keep those in charge well supplied with salable

Attractive Field for Women

NOT TO every woman is given the duty and joy of home-making. Many are forced to enter the world and make their own way. Moreover, it is idle to deny that many most admirable women do not find their greatest happiness or their best expression in domestic occupations.

But women, almost universally, are interested in the human side of every question, and therefore it is peculiarly fitting that the recent developments in applied psychology should invite their attention. Its practical application to all manner of affairs, including many which at first glance seem unrelated to this science, is now well under way, and too few are prepared to meet the demand for persons trained to give psycho-

logical tests.

Universities are calling attention to the fact that this is a splendid study for women to take up. Several great institutions of learning are pushing it vigorously. Psychological tests have recently been adopted as an alternative method of admission to Columbia College and to the Universities of Pennsylvania and Illinois. This innovation will spread. It may become the rule rather than the exception. Psychology is a most inviting field for those suitably gifted to enter.

AMERICAN FRUIT GROWER WARDER



Edited by Samuel Adams

Fathers Mothers

This Concerns You

Is there anything more poisonous to the young mind than trashy reading matter? Remember the boys and girls of today are the men and women of tomorrow.

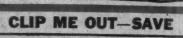
Give Them a Helping Hand

Do your duty by supplying your children with good literature. This kind of reading has a great deal to do with the molding of the characters of the young folks, whose minds are just reaching out and grasping new ideas. We offer below a number of clubs with well-known publications. Pick out your club and send your order today.

OFFER No. 11			OFFER No. 20	4
McCall's Magazine 1 yr. 1 Today's Housewife 1 yr.	\$1.00 1.00	All	The Dairy Farmer 1 yr. \$.50 Girl's Companion 1 yr. 50	All
American Fruit Grower1 yr.	1.00		American Fruit Grower1 yr. 1.00	For \$1.6
OFFER No. 12	\$3.00		\$2.00	
	95	110	OFFER No. 21	7839
Farm and Fireside	.50	All	Youth's Companion 1 yr. \$2.50 People's Home Journal 1 yr. 1.00	All
American Fruit Grower1 yr.		For	American Fruit Grower1 yr. 1.00	For
	1 05	\$1.25		\$3.85
OFFER No. 13	81.85		OFFER No. 22	
Gleanings in Bee Culture1 yr. 8	1.00	17	Ohio Farmer	
American Poultry Advocate_1 yr.	.50	All	People's Popular Monthly 1 3T25	
American Fruit Grower1 yr.	1.00	For	American Fruit Grower1 yr. 1.00	For
	2.50	\$1.75	\$2.25	\$1.50
OFFER No. 14	-	450	OFFER No. 23	
Woman's World 1 yr. 8			Nat'l Stockman and Farmef. 1 yr. \$1.00	
Hoard's Dairyman 1 yr.	1.00	All	Woman's World1 yr50	All
American Fruit Grower1 yr.		For \$1.75	American Fruit Grower1 yr. 1.00	For \$1.75
**************************************	2.50	4	\$2,50	92.10
OFFER No. 15	15.00		OFFER No. 24	
Farm and Home 1 yr. \$		ST. SY	Michigan Farmer 1 yr. \$1.00	12119
McCall's Magazine1 yr.		All	Christian Herald	All
American Fruit Grower1 yr.		For \$1.50	American Fruit Grower1 yr. 1.00	For 22.85
	2.25	100	\$4.00	-
OFFER No. 16		BUIL	OFFER No. 25	
Woman's Home Companion_1 yr. \$2			Pennsylvania Farmer 1 yr. \$.75	-
American Magazine		For		For
American Fruit Grewer 71. 1		\$4.30		\$1.75
	5.00		\$2.25	3.75
OFFER No. 17	ST BY	West !	OFFER No. 26	333
			Gleanings in Bee Culture	
American Fruit Grower1 yr. 1		For \$1.50	American Fruit Grower1 yr. 1.00	For \$1.75
	2.00	-	\$2.60	
OFFER No. 18	The same		OFFER No. 27	
Woman's World	.50 F	Both		Both
American Fruit Growerl yr. 1.		For 1	American Fruit Grower1 yr. 1.00	For \$1.15
81	.50	1.43	\$1.35	1.10
OFFER No. 19	12.00		OFFER No. 28	
Pictorial Review	00 E	loth !	Farm and Home1 yr. \$.25 i	Both
American Fruit Grower1 yr. 1.	.00 F	For a	American Fruit Grower 1 yr. 1.00 I	For
	OPERATOR A	12.50	\$1.25	\$1.15
83.	OU	STATE OF	CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PARTY O	STARL P

These prices are sure to advance later in the season; send your order Today.

DO IT NOW!



Chicago

American Fruit	Grower	State-Lake	Bldg.	Chicago	***
----------------	--------	------------	-------	---------	-----

Gentlemen: Enclosed find \$------for Club No.----which send to the following address:

Name

Address

.

State

American Fruit Grower Pattern Service

Price of Patterns 10 Cents Each



No. 3631. A Pretty Frock for the Little Mise—This is a model very becoming to "tiny girls," The fulness of the dress below the yoke portions may be smocked, or shirred. The sleeve could be finished without the trimmed cuff, as the pattern provides a band cuff. Gingham, seersucker, lawn, repp, poplin, batiste, dimity, also gabardine, voile and silk. The pattern is cut in 4 sizes: 2, 4, 6 and 8 years. Size 4 years will require 3 yards of 27-inch material. A pattern of this illustration mailed to any address on receipt of 10c in silver or 1c and 2c stamps.

Nos. 2654-2663. Ladies' Suit—Brown wool velour, or blue velveteen would be nice for this. The coat pattern, No. 2654, is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The skirt, No. 2653, in 7 sizes: 22, 24, 26, 28, 30, 32, and 34 inches waist measure. It will require about 8 yards of 44-inch material for a medium size, for the entire suit. This illustration calls for TWO separate patterns which will be mailed on receipt of two cents FOR EACH.

No. 3011. Becoming Freek for Methe '6c.

For this neat and attractive dress one could gingham, chambrey, linen, drill, gabardine, was erge, or silk. The sleeve may be finished in win reliable length. The pattern is cut in 4 sizes: 48 and 10 years. Size 8 requires 3½ yards of 21 material. A pattern of this illustration malied any address on receipt of 10c in ailver or le and 8 stamps.

No. 3036. Ladles' Ons-Piece Dreschologia saffected at the left side of the panel of The sleeve shows a new style feature in the shaping. The pattern is cut in 7 sizes: 24, 40, 42, 44 and 46 inches bust measure. Serequires 5% yards of 44-inch material.

Send two cents silver or stamps for our per date Fall and Winter 1919-20 Catalogue, conto 550 designs of ladies', misses' and children sterns, a concise and comprehensive article on a ing, also some points for the needle.

Send All Orders to

American Fruit Grower, Pattern Dept CHICAGO im be let for overs and the scenio andice to the md we lut at 1. The share see the start, and over the start, and over the start, and over the start, and the start and the start, and the

ipon exaction which itself. It bility, han the same ment which in the reacribed mots typin then too roven bar te table wal or obtained in few pictures.

me, and the or a mality of the control of the contr

in the sel to the has fit lines. The many more having a sur and also a letter markit Where a research of the sures is ser the sures is ser The singer of the sures is the ser are boxes are the ser are boxes are the more are the more are the ser are the more are the

Grower

Wei

3031



A Well-Furnished Table

cloth and napery, the gleam of polished silver, things that have been applied and joy of the housewife since the in beginnings of the art of housekeeping; it for years we have bought our table were without regard for the table china at the latter without thought of the other reasones, and too many of us have been undeapped at the outset by a sordid, on-descript store of wedding gifts bearing of the alightest relation one to another and we used to display them all at once at at last have learned better.

The standards of value in all table ware we seen radical changes in the past few

that last have learned better. The standards of value in all table ware we seen radical changes in the past few are. From service plates to napkins, moynter forks to coffee spoons it used be that the handsomept set meant one of rish design; from this they went to the standard set of the server and plain, which marred and owed scratches so easily as to be impacted, until now we are using just ough design on both linen and silver to see the severity and still not have the of heing overdone.

Values in terms of dollars and centsus always be determined somewhat on elaboration of detail, but artistic mass which good taste demands in the mishings of the table today, depend on exactly the same principles of decoramy which are required for the dining room elf. It is the old, old theme of suitative, harmony between all things seen at a same time, and the proper use of orname which is never meant for display. In the table linens, the damask now seribed as correct shows ribbon bowout tying the more delicate sprays, etc., in too we have a single or a series of two bands falling just below the edge of table following it in a round, square, if or oblong shape as the case may be.

Markings in Many Styles

Markings in Many Styles

Markings in Many Styles

As usual whenever the plainer designs
is in vogue, the monogram comes into
in, and what can give a more distinctive
ised or more charmingly express the permality of the hostess. The shape, pattern
id size of the monogram should always
is governed by the character of the piece
well as its design. Solid, heavy and
id-fashioned tufted work is being used.
It is to be in the content of the piece
well as its design. Solid, heavy and
id-fashioned tufted work is being used.
It is to be lettering are all in
ogue. Frames, square, round and dianoad shaped surround the monogram in
hay of the newer pieces.

The monograms seemed to be placed in
the center fold, nearer one end preferably
on the dinner cloth though the luncheon
cloth may be marked in the corner, or the
center of the square or oblong fold. The
hapkins have a corresponding monogram
in proportion.

Let us be careful to keep to matched

proportion.
Let us be careful to keep to matched to a very close resemblance to all linens at the same time, so that the restruing of one idea carried throughout the mous pieces even to the service cloth, as be felt if not seen.

Flat Silver

a the selection and use of table silver to has followed the same lines as in a. The "Lenox," "Lady Mary" and more of such—all being designs ing a small amount of ornamentation also a simple monogram or a single or marking.

marking.
here a maid is among the so fortunate essions of the household, the flat silver to all found on the table at the beginof the meal but is brought in as the served.
he singular charm of hand beaten silver it in a class by itself, and all the plainhapes in candlesticks, salt cellars, pepboxes and flower vases or bowls lend so in more distinction to the table than more conate which seem to rival one there in grandeur, that we wonder

)ept.

eople did not wake up to their beauty

long ago.
In the glassware, we find the clear crystal being used with perhaps the addition of the plain gold rim for more elaborate occa-sions. Cut glass is not being shown in the better class shops.

Styles in China

Styles in China

When we look into the present day styles in table china, there is far more latitude of choice. You may pay unlimited prices for fine English or Haviland ware bordered with a wide band of deep etched gold or, going down the scale, you may buy another expression of the same fundamental idea having a narrow French gilt rim for far less money.

Still another style inexpensive and most effective for any dining room where blue

effective for any dining room where blue prevails, is made in imitation of a Royal Worcester pattern and carries a deep blue band around the edge of each piece. It is a heavy ware but very beautiful.

a heavy ware but very beautiful.

But this is not to say that all things in china must be of the plainer type. Wonderfully beautiful effects can be had by the use of the highly decorated providing only that this has been selected with regard for the other table decorations and especially when chosen to harmonize with the color scheme of the dining room, or if the latter has been developed from a motif furnished by the pottery. Take for instance the stunning reproductions of old Coalporte china showing the "Indian Tree" design, famous these days and permanent in value. Sets of these dishes can be had quite reasonably considering what must be paid for all dishes today, yet so good is the reproduction that, except on close inspection which should not be found among well bred guests, one can hardly tell them from the genuine which costs six times the price.

Nothing could be more decorative than

the genuine which costs six times the price.

Nothing could be more decorative than such a colorful service in a carefully planned dining room having upholsteries and hangings carried out in some of its yellows and blues, soft greens and silver or for warmer tones in rose, with other table appointments rather severe. Service plates showing a broad band of the color note of the room is another emphasizing decorative effect that may be made as costly or inexpensive as one chooses to make it.

The old Willow pattern found in Fing.

The old Willow pattern found in English or Canton china is the most popular of the blue and white ware if that is our choice of colors. This makes a very attractive breakfast set. Royal Winton is to be found in a good imitation and very attractive. These are all to be found in open stock patterns making it possible to buy just the pieces one desires.

And too, we must not forget that flow-

And, too, we must not forget that flowers or some bit of living green on the table is quite as important as china and silver, for by such things the eye is carried away from the plate as subtly as conversation lifts the thoughts above bread and meat. Have it a sprig of evergreen stuck in a china painted pot, a dwarf Japanese tree or a dish of moss if you will.

The time has pessed when we set down

The time has passed when we sat down to a table lavish in one glory of silver, another glory of linen, another glory of china and still another of glass each fighting the other for glory. Let us spread a feast for the eye as well as the palate, particularly remembering that the former can neither assimilate or enjoy too many kinds of things at once. things at once.

The "American Fertilizer" calls attention to the fact that "We have now for the first time, potash taken from the gases of a blast furnace. The potash contents of the ore which passes through our blast furnaces is at least one third of the amount needed as fertilizer. Why should we continue this daily waste when we are paying good money for foreign potash? The cost of the potash is so small that it can be sold at a profit in spite of competition."



Carbide Gas Lights 24-Hour Shifts —Cooks Your Dinner - Irons Your Clothes

HE same brilliant powerful white light that makes continuous construction work possible in subways, tunnels and mines

> (such as the gigantic Catskill Water Supply System, the Panama Canal, and the N. Y. Subway)

is already lighting over 250,000 country homes, besides supplying gas for the cooking stoves and for the sad irons that take the sadness out of ironing day.

Wherever machinery breaks, Carbide Gas is welding the parts together - on railroads, in shipyards, factories and plants big and little—all over the world.

The story of Carbide reads like a story out of the Arabian Nights—of miracles accomplished between sleeping and waking.

> If you wish to read it, write for free booklet

UNION CARBIDE SALES COMPANY

30 East 42nd Street. New York City, N. Y. People's Gas Bldg.

Kohl Bldg

Dept. 135

STATEMENT OF OWNERSHIP

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of American Fruit Grower Company, Inc., published monthly, at Chicago, Illinois, for October, 1919.

nois, for October, 1919.

State of Illinois, County of Cook, sa. Before me, a Notary Public in and for the State and county aforesaid, personally appeared R. B. Campbell, who, having been duly sworn according to law, deposes and says that he is the Publisher of the American Fruit Grower Company, Inc., and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

lisher, editor, managing editor, and Dusiness managers are: Publisher, R. B. Campbell, 416 State-Lake Bldg., Chicago. Editor, Samuel Adams, Green-wood, Virginia. Managing Editor, None. Busi-ness Manager, H. R. Mankin, 416 State-Lake Bldg., Chicago.

Bldg., Chicago.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding I per cent or more of the total amount of stock.) M. L. C. Adams, Greenwood, Va.; R. B. Campbell, State-Lake Bldg., Chicago; H. R. Mankin, State-Lake Bldg., Chicago; M. C. King, Pelham, S. C.; J. E. Ford, 2246 Giddings, Chicago; Hollis Rinehart, Charlottesville, Va.; R. I. Barnett, Atlanta, Ge.

None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each interest and this subject to a security or the said stock.

Sworn to and subscribed before me this 20th day of September, 1919.

[SEAL.] ANNA C. WIEHLE, Notary Public.

(My commission expires April 11, 1923.)



Durable-DURHAM Hosiery is a pro of industrial de racy—never of Child Labor. We have no strikes or lockouts.



Full of warmth and full of wear

HERE is comfort for cold weather, Durable-DURHAM fleecy-lined Hosiery is warm, and because of this it is the sensible hosiery for winter wear. Every pair has soft, thick, fleecy lining. They have the strength to give long wear—and stay good-looking through many wearings and washings.

Durable-DURHAM Hosiery indes not only Fleecy-lined but other styles for every member of the family—for work, dress, or play-for every season of the year. The

children's stockings are made doubly strong to stand the hardest wear and tear. Styles for men and women include all fashionable colors and come in all weights from sheer mercerized to the heavy fleecy-lined.

Every pair is extra strongly re-inforced at points of hardest wear. Legs are full length; tops wide and elastic; sizes are accurately marked. Soles and toes are smooth, seamless and even. The Durham dyes will not fade.

DURABLE DURHAM HOSIERY

FOR MEN, WOMEN AND CHILDREN

MADE STRONGEST WHERE THE WEAR IS HARDEST

Ask for Durable-DURHAM Hosiery and look for the trade mark ticket attached to each pair. You should be able to buy it at any dealer's. If you do not find it, please write to our sales department, 88 Leonard Street, New York, giving us the name of your dealer.

Durham Hosiery Mills, Durham, N. C. Sales Office: 88 Leonard Street, New York

Subscribe NOW! **Save Money!**

You don't need a percentage table to find out what the American Fruit Grower at the present half-price rate-\$1.00 for two years—and at the price it will be very soon— \$1.00 for only one year—means to your pocket book.

It means, in dollars and cents, that if you subscribe now, at the old rate, you will get double the value of your money. For \$1.00 sent now will bring 24 issues (2 years) of the

American Fruit Grower. This special offer is being held open only for a very limited time; then subscriptions will be \$1.00 for one year.

Sign, Tear Off and Mail the Coupon and \$1.00 to us

This Coupon and \$1.00 will Save you \$1.00

Did you take advantage of our special offer last month? If not. save \$1.00 by subscribing NOW!

AMERICAN FRUIT GROWER, State-Lake Bldg., Chicago Please enter my subscription for two years at the Special Half-Price rate. I enclose \$1.00 (bill, check, money or express order).



We will pay \$1.00 each for helpful suggestions which will save time, money or strength in all sorts of housework. None save original ideas can be accepted. Unaccepted manuscripts will not be returned unless an addressed, stamped envelope is enclosed. Address "Housekeepers" Exchange," American Fruit Grower, Chicago.

To clean marble take two parts of common soda, one part pumice stone and one part of finely powdered chalk. Sift all together through a fine sieve and mix with water. Rub well over the marble, let stand ten minutes and wash off with soap and water. R. K., Penn.

To freshen old bacon, let soak overnight in buttermilk. S. E. S., Missouri.

Before polishing furniture, clean it well with a cloth wrung out in warm water to which a little vinegar has been added. This gives a more brilliant polish.

R. O. H., New York.

Save all chicken feet and scald in boiling water to remove skin. No other thickening is needed for soup than the gelatine yielded by the feet. L. T., Michigan.

When ironing stand on a rug or carpet to rest the feet. U. G. B., Iowa.

A tablesmoon of vinegar in the lard used for frying doughnuts will prevent the lard from frying away and the doughnuts from absorbing grease.

G. J., Arkansas.

If strong bacon is put to soak in sweet milk and brought to the boiling point before frying, a delicious flavor will result.

R. R., Idaho.

Corks used in place of castors on furniture make it easy to move the furniture and leave no marks on the floor. Glue the corks on the corners. G. M., Kansas.

Men's old flannel shirts, dyed a dark navy blue make excellent middy blouses for the school girl. S. T., Illinois.

When making an apple pie, put in about half as much sugar as is needed. When the pie is taken from the oven make a male hole in the center of the top crust and our in three tablespoonfuls of maple sync. This gives a delicious flavor.

R. M. F., Vermont

When cooking very acid fruit such gooseberries, plums or rhubarb, and small pinch of soda and stir thorough This reduces the amount of acid and if fruit requires less sugar.

E. B., North Daket

Badly dried lemons can be soften standing for a few minutes in water after which they make fine pie.

J. M. N., Color

To clean paint brushes that have come hard and dry, soak them in het v gar for an hour.

A. H., N. Dal

orange peel grated, using only the re-low part and mixed with sugar and con-starch, 1 tablespoonful of orange peel to two of sugar and one of cornstarch mains a good non-alcoholic flavoring.

S. A. B., Oklahoma

When dyeing materials with any of the varieties of dye soaps on the market, he the soap before using and avoid spotting the garment to be dyed. The color when the more evenly spread through the good also.

H. E., Indiana.

To make cake light, add a few dr gylcerine when mixing in the propor a teaspoonful to a pound of flour. R. T., M

Freshen the old window shades by paining them on the inside a color to harmonic with the furnishings. To prevent the paint from cracking add two tablespools for melted wax to each quart of war paint.

W. B., N. Y.



contained in the Afgeo Cook Book tested and consequently the will be saved any disappointing

Peanut Puree

1 quart milk 1 bay leaf 1 tablespo 1 quart milk 3/2 teaspoon onion juice 2 teaspoons salt 1 tablespoon celery seed 3/4 cup milk 2 tablespoons flour 1 cup peanut butter

Heat milk and seasonings in double boiler. When heated, add peanut butter and beat well with an egg beater to combine thoroughly. Mix flour and milk together. Add soup and stir constantly until it thickens. Cook fifteen minutes; strain;

Apple Pudding

2 large apples grated ½ cup maple syrup 2 eggs well beaten ¾ cup milk 2 cups cornflakes

Mix together and bake like a custard.

Baked Tongue

1 fresh tongue 2 small onions 4 cup water 6 potatoes 1 teaspoon salt 13 cups stewed toma- 1-6 teaspoon pepper

Boil tongue in salted water until skin can be removed. Sprinkle with salt and pepper and place in bake pan. Mix tomato juice and chopped onion and pour over the tongue. Bake two hours in slow oven. An hour before it is done place seasoned potatoes around tongue. Remove tongue to platter, also potatoes. Thicken juice left in pan with flour, adding a little water if necessary. Serve gravy in a separate dish.

Sausage Loaf

1 pound round steak
1/2 pound ham
1/2 pound ham
1/2 teaspoon mace
1/2 teaspoon salt
1/2 teaspoon salt
2 cups soft bread crumbs
1/2 teaspoon Worcestershire sauce

Put meat through a chopper. Mix wd, add bread crumbs and seasoning. Rd, sew in muslin bag and steam for two hour. Serve cold, cut in thin slices.

Turkish Salad

1 green pepper seeded and shredded fine
1 cup celery shredded fine
10 English walnut meats and halved

Mix and stand on ice for three hom. Before serving press off all the liquid possible and mix with mayonnaise.

Smothered Beef

Smothered Beef

2 tablespoons butter

8 slices cold roast beef

1½ teaspoon salt

1-6 teaspoon pepper

Cook onions in salted water until tends
Make white sauce of flour, butter and mand seasonings.

Arrange one-ball to onions in a layer in a greased baking did Lay on the sliced beef and cover wiremaining onions.

Pour white sauce or all. Sprinkle with crumbs and bake with brown.

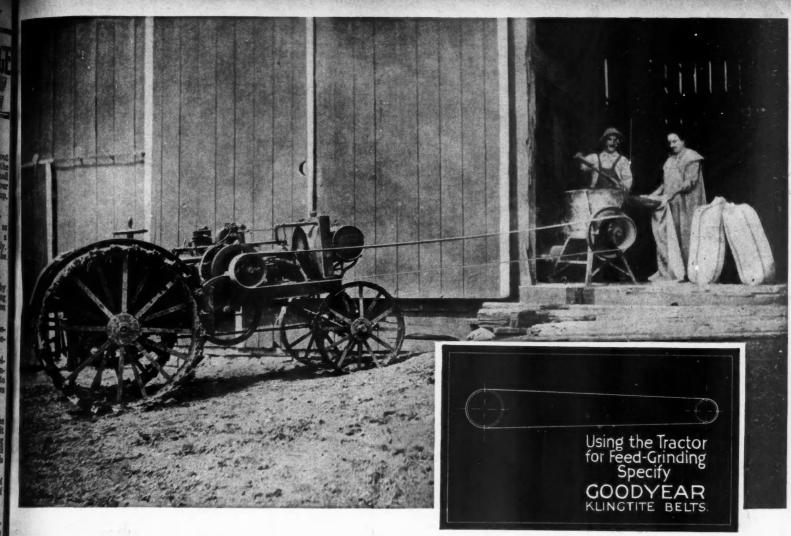
Individual Lamb Pies

2 cups chopped roast 1 teaspoon salt lamb 4 teaspoons baking por der % cup milk 2 tablespoor 2 cups flour ns butter

2 tablespoons butter 2 cups flour
Make a dough of butter, flour, salt, bit
ing powder and milk. Toss on flow
board and roll to one-fourth inch thicknes
Cut in four squares. Fill with meat more
ened with gravy. Fold over corners
ope fashion, turn back the points in its
center. Bake in hot oven.

Green Tomato Pie

m sized green 1/2 cup raisins Cook until thick, cool before



Threshing, Feed-grinding—and Goodyear Belts

Those who plan to use their tractors for feed-grinding are one of the largest purchasing groups interested in Goodyear Klingtite Belts. Their interest in Goodyear Klingtite is due to the same conditions that brought about such a wide use of this belt by threshermen this year. Like the threshermen, they realize that old style belts slip too much, stretch too much, have to be run too tight, cause too much trouble and waste too much time making repairs.

Modern high speed machinery needs modern high speed belts. Goodyear Klingtite belts are modern high speed belts—unstitched. They are flexible and hug small pulleys closely. They do not require hours of breaking in, but run sliplessly from the first minute that they are put to service.

Their friction surface grips the pulley face, even when the belt is very loose. Ross Diehl, near Chillicothe, Mo., reports that he has run his Klingtite so loose that six feet of it touched the ground and yet there was no slip.

The threshing outfit of Mr. Askins, from near Winfield, Kansas, reports that because Klingtite runs sliplessly, even when very loose, it was much easier to set up his outfit—and he doesn't have to set it up so often. Threshing outfits everywhere have found also that Goodyear Klingtite is permanently water-proof, and stays water-proof without any painting or dressing.

Because of this water-proof quality, Goodyear Klingtite does not shrink when exposed to rain, dew or snow. It does not stretch because of heat or dryness.

You can buy Goodyear Klingtite Belts from the Goodyear Mechanical Goods Service Station Dealers. They buy direct from the factory, so that they can sell you this high-speed, supple, friction-surface belt for just about the same price as that charged for ordinary belts. They have both endless and other belts in stock and can sell you any length in all standard widths. If you want more information about Goodyear Klingtite, either for feed grinding and other all-round uses—or for threshing and other heavy duty—ask for the Goodyear Farm Encyclopedia. All Mechanical Goods Service Stations have it, and you can also get copies direct from Akron.

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

GOOD AKRON

More than 13,000 men are building your Maxwell

Maxwell. Yet that is the picture which a little journey through the eight great Maxwell plants supplies.

If they built but that one car in a day its cost to you would represent a king's ransom.

But they are so well organized, their work so very definite, they are so expert in the special one thing they do, and they are aided by so many thousands of uncanny and superhuman machines, whose accuracy is down to 1/1000 of an inch, that you pay but a small price for a Maxwell.

A great aid to the economy of manufacture is the use of many, many millions of dollars so that a 10-cent piece saved on a bit of material often runs into amazing figures.

Thus the big staff of purchasing experts for Maxwell become your purchasing experts and the saving goes on to you in the price.



\$985 is indeed a small sum to pay for a great value in a great car like Maxwell.

MAXWELL MOTOR COMPANY, Inc. DETROIT, MICHIGAN

